Lockheed Martin Technology Services Environmental Services/REAC 2890 Woodbridge Avenue, Building 209 Annex Edison, NJ 08837-3679 Telephone: 732-321-4200 Facsimile: 732-494-4021



DATE: July 29, 2009

Edward Gilbert, U.S. EPA/ERT Work Assignment Manager TO:

Jeffrey Bradstreet, REAC Task Leader Whole the the Dennis Miller, REAC Program Manager FROM:

THROUGH:

SUBJECT: SAPPHIRE MINE ASBESTOS SITE, JACKSON COUNTY, NC

WORK ASSIGNMENT #0-253 - FINAL TRIP REPORT

BACKGROUND

The Sapphire Mine Asbestos Site is a former asbestos mine that operated in the 1960s and was initially identified in the 2005 United States Geologic Survey (USGS) Open File Report. The Site is accessible as a recreational gem collecting site in the Fairfield Sapphire Valley Resort area. Holly Forest Association and the Fairfield Sapphire Valley Master Association (FSVMA) currently own the Site.

The parking lot of the mine is unpaved and located directly on the south side of U.S. Route 64. A trail leads from the lot several hundred feet east to the mine. There are areas of bare soil along the trail leading to the mine, and in the nine area, that contain friable anthophyllite-rich fragments, ranging from non-detect to 15 percent (%) asbestos. Asbestiform anthophyllite, locally approaching 100 % anthophyllite, has been positively identified by Polarized Light Microscopy (PLM) analysis in samples taken from the mine.

The Site has historically been used for recreational gem collecting or rockhounding, which is the collecting of rocks or mineral specimens from their natural environment. A variety of tasks are involved that include walking, digging, hammering, sorting, screening or sieving, and scraping and washing. Visitors to the mine hammer on boulders and rocks, potentially exposing areas with high anthophyllite asbestos content. Large chunks of anthophyllite-like rock have been observed scattered around the Site where they have been broken from the outcropping ultramafic strata. According to the Sapphire Management Company, this recreational mine has been accessible to the public for at least twenty years and the mine has received thousands of visitors during that time. In the Fall 2006, in response to the North Carolina Department of Environmental & Natural Resources (NCDENR) and the Environmental Protection Agency (EPA) Region IV, the property owner posted the Site to prevent trespassing, blocked the parking lot entrance, and all references to the Sapphire Mine were removed from the Sapphire Resort's web site and promotional material.

EPA's Region IV Emergency Response and Removal Branch (ERRB) management have been made aware of this Site, but a removal assessment has not yet been officially requested pending the results of this latest NCDENR effort. Additional sampling efforts to determine the potential migration of asbestiform fibers from the Site are being discussed with NCDENR. The potential for downstream migration is high due to the precipitation runoff via surface water. In addition, fibers may be transported from the Site via human foot traffic and wind entrainment.

Materials inadvertently carried to the parking area could then be further disturbed by vehicular traffic and wind.

ACTIVITY-BASED SAMPLING METHODS

Descriptions for the raking and shoveling activity-based sampling (ABS) are found in EPA Environmental Response Team (ERT) Standard Operating Procedure (SOP) 2084, *Activity-Based Air Sampling for Asbestos*. Descriptions for the chiseling and sieving ABS are found in Response, Engineering, and Analytical Contract (REAC) document 0253-DQAPP-051407, *Quality Assurance Project Plan for Sapphire Mine Asbestos Site*. The target duration for all ABS was 220 minutes. Participants donned personal protective equipment (PPE) and were fitted with high and low volume sampling pumps within backpacks with the filter cassette secured to the shoulder straps near the participant's lapels in the breathing zone. Two downwind and one up-wind high-volume stationary samplers were also deployed on the perimeter of each activity.

For all the ABS scenarios, high and low volume sampling refers to the sampling rate of the pumps used. High flow samples were collected at about 10 liters per minute (L/min), while the low flow samples were collected at about three L/min. The samples were collected simultaneously and collocated. If the high volume samples were overloaded and could not be analyzed, then the low flow samples would be analyzed.

Raking

Participants raked soil, weeds or grass using a metal leaf rake with a width of approximately 20 to 28 inches. Participants disturbed the top half-inch of soil with an aggressive raking motion. Raking occurred in a prescribed area with an arched motion raking from the left to the right. Participants raked debris towards themselves facing one side of the prescribed area for 15 minutes, then turned 90 degrees clockwise and repeated the task on a new side continuing this rotation for the entire 220 minute sampling period.

Shoveling

Participants dug a hole of at least two cubic feet (ft³) using a standard sized shovel. Soil was placed next to the hole and in five-gallon buckets and participants subsequently refilled the hole with the soil that had been removed. Participants repeated this series of tasks while rotating 90 degrees clockwise every 15 minutes and continued for a sampling period duration of 220 minutes. A well-mixed portion of the soil from this scenario was saved for use in the sieving scenario.

Sieving

Participants sieved the material remaining from the digging scenario in hand-held sieves supplied by the Work Assignment Manager (WAM). The participants attempted to refill the hole with the soil as it passed through the screen. Participants continued the sieving process while rotating clockwise 90 degrees every 15 minutes and continued for a sampling period duration of 220 minutes.

Chiseling

Participants used a hammer or chisel to break or chip stones, boulders and rock formations and generally broke apart solid matrices. A small area was worked upon for the entire 220 minute period.

AIR SAMPLING ACTIVITIES & RESULTS

Mobilizations

REAC personnel mobilized for the initial sampling effort in the Sapphire Mine area on Monday March 26, 2007. Air and soil sampling for asbestos events spanned Tuesday March 27, 2007 from approximately 0900 through 1800; Wednesday March 28, 2007 from approximately 0800 through 1730, and Thursday March 29, 2007 from approximately 0800 through 1800. Three background ambient air samples per day located within a few feet of each other were taken at an up-gradient location as selected by the WAM.

REAC personnel mobilized for a second sampling effort in the Sapphire Mine area on Monday July 23, 2007. Air and soil sampling for asbestos events spanned Tuesday July 24, 2007 from approximately 0900 through 1800; Wednesday July 25, 2007 from approximately 0900 through 1700, and Thursday July 26, 2007 from approximately 0900 through 1300. Severe weather during the afternoon of Thursday July 26, 2007 precluded sampling. Three background ambient air samples were taken on days one and two and two background samples on day three.

During both mobilizations, samples collected at locations Background 1, Background 2, and Background 3 were completed with Aircon II sampling pumps set to collect continuously for the duration of the workday at a flow rate of 10 L/min. Background samples typically ran for nine to ten hours. However, background samples on day three of the second mobilization ran for about five hours due to severe weather.

Analysis of Samples

REAC personnel initially demobilized from the Sapphire Mine area on Friday March 30, 2007 and all air samples were sent via Fedex to REAC for arrival on Tuesday April 3, 2007. Upon EPA Region IV securing Batta Laboratories, Inc. (Batta) in Newark, Delaware (DE) for completion of asbestos in air analyses, samples were forwarded by REAC via FedEx on Tuesday July 3, 2007. The second demobilization was completed on Friday July 27, 2007 and all samples were forwarded to REAC for arrival on Tuesday July 31, 2007. Upon receiving instructions from EPA Region IV, samples were forwarded to Batta on Friday August 31, 2007.

Samples were delivered to Batta for Transmission Electron Microscopy (TEM) analysis based on the *International Organization for Standardization (ISO), International Standard, ISO 10312 (1995(E)), Ambient Air – Determination of Asbestos Fibers – direct transfer TEM Methodology.*

A direct sample preparation technique is preferred for analyzing asbestos samples because there is less disruption to the structures, fibers, matrices, and bundles than the indirect preparation method. The direct method essentially leaves the particles in the same position on the filter as when they were deposited during sample collection. A high and low volume sample was collected for ABS activities in order to increase the likelihood that at least one sample could be analyzed by the direct preparation method (ISO 10312). The high and low volume samples were co-located and collected over the same sampling period in order to estimate the same exposure. When the high volume sample was overloaded with extraneous particulate, the corresponding low volume

sample was analyzed and the high volume sample was archived. This approach facilitated comparability between samples.

If both the high and low volume samples for a particular activity were unable to be analyzed by the direct preparation method due to overloading of dust or contaminant, the indirect preparation was utilized on the high or low sample. Batta analyzed overloaded samples via *International Organization for Standardization (ISO)*, *International Standard*, *ISO 13794 (1999)*, *Ambient air – Determination of Asbestos Fibers – indirect transfer TEM Methodology*.

ABS

REAC personnel completed ABS at two distinct areas of the Site. The Lower Area was reached by traveling approximately 50 yards through the woods, then turning north upstream along a small creek for about 25 yards. All four activities took place in this area and there were several sheer rock walls where the chiseling ABS was completed. Approximately 50 yards up a steep trail was an opening to flat ground where Upper Area ABS was completed. Raking, shoveling, and sieving were completed in the Upper Area. No chiseling ABS was completed in the Upper Area. Natural growth in both areas resulted in an inability to record accurate geographical sample location data with a Global Positioning System (GPS). Figure 1 depicts approximate locations of the Upper and Lower ABS Areas, command post, and background sampling locations.

For all air sampling locations, an asbestos sampling train consisting of a 0.8-micron (µm), 25-millimeter (mm) mixed cellulose ester (MCE) filter connected to a sampling pump was used. The top cover from the cowl extension on the sampling cassette was removed ("open-face") and the cassette oriented face down at an angle of at least 45 degrees. The perimeter and reference air samples were collected using AirCon II samplers, calibrated to 10-liters (L)/minute (min). For ABS activities, QuickTake 30 sampling pumps calibrated to 10-L/min and SKC personal sampling pumps calibrated to a flow rate of 3.0 L/min were used to collect high and low volume personal air samples over a 220 minute period.

Air sampling was completed within areas of dense vegetation, precluding the use of instruments to record accurate geographical sampling location data. Figure 1 depicts the Site with approximate locations of the Upper and Lower Areas, Command Post, and Background Samples. Tables in the body of the report reflect Total Asbestos results as Phase Contrast Microscopy Equivalent (PCME) and Total Transmission Electron Microscopy – EPA Superfund Method (TEM-EPASM) air concentrations in structures per cubic centimeter (s/cc) for those samples equal to or above the analytical sensitivity. PCME fibers are equivalent in dimension to fibers that can be detected under low magnification with a Phase Contrast Microscope (PCM). PCME structures are defined as asbestos structures with the following dimensions: length greater than 5.0 microns (µm), a width greater than or equal to 0.25 µm and an aspect ratio (length/width) greater than 3 to 1. The PCME results are a subset of the TEM-EPASM results and generally include the longer fibers. As a rule of thumb, if only TEM-EPASM structures are reported, then the majority of the structures are short (less than 5.0 µm in length). Tables after the body of the report shows results for PCME and Total TEM-EPASM methods for a cross-section of all analytes that were detected above the analytical sensitivity for any air sample. This cross-section of analytes includes actinolite, anthophyllite, total amphibole, total asbestos, and tremolite.

Daily Background

A total of 16 background samples were taken over the two mobilizations. Two or three background samples were co-located each day and sampling times ranged from 290 to 570

minutes. Sample #43222 on July 24, 2007 was damaged during packing and not sent to the laboratory. All background samples were negative for asbestos at the prescribed analytical sensitivity and results for total asbestos are shown in Table 1 for all background samples.

Raking

REAC personnel completed three raking ABS events during each mobilization. Three personal and two perimeter samples were taken during each activity and a grand total of 20 samples, including two colocated samples, were sent to the laboratory for analysis.

There are no personal samples associated with the ABS event of March 29, 2007. Personal high volume sample #0-253-0072 was not sent to the laboratory due to an air sampling pump fault that resulted in collection of an insufficient sample volume. For unknown reasons, corresponding low volume sample #0-253-0071 also was not analyzed. Perimeter samples #43224 and #43260 were not sent to the laboratory due to damaged filters. Due to heavy rainfall, only one personal sample was analyzed from the event of July 26, 2007.

Positive results (above the analytical sensitivity) were detected in Upper Area raking perimeter samples #0-253-0007, #0-253-0008, #0-253-0027, #0-253-0029, and #43259 and personal high volume samples #0-253-0013, #0-253-0033, and #43261. Total asbestos air concentrations are shown in Table 2 on Page 6 for samples associated with the raking ABS in the Upper Area. Results for a cross-section analytes for samples associated with this event are shown in Table 10 on page 18.

TABLE 1
Asbestos in Air Sampling
Total Asbestos Results
Daily Background
Sapphire Mine Asbestos Site
Jackson County, NC
July 2009

Sample #	Sample	Event ID	PCME	Total TEM	Analytical
	Date			EPASM	Sensitivity
0-253-0001	3/27/2007	Trip #1 Day 1	ND	ND	0.0001
0-253-0002	3/27/2007	Trip #1 Day 1	ND	ND	0.0001
0-253-0003	3/27/2007	Trip #1 Day 1	ND	ND	0.0001
0-253-0024	3/28/2007	Trip #1 Day 2	ND	ND	0.0001
0-253-0025	3/28/2007	Trip #1 Day 2	ND	ND	0.0001
0-253-0026	3/28/2007	Trip #1 Day 2	ND	ND	0.0001
0-252-0057	3/29/2007	Trip #1 Day 3	ND	ND	0.0001
0-253-0058	3/29/2007	Trip #1 Day 3	ND	ND	0.0001
0-253-0059	3/29/2007	Trip #1 Day 3	ND	ND	0.0001
43221	7/24/2007	Trip #2 Day 1	ND	ND	0.0001
43223	7/24/2007	Trip #2 Day 1	ND	ND	0.0001
43246	7/25/2007	Trip #2 Day 2	ND	ND	0.0001
43247	7/25/2007	Trip #2 Day 2	ND	ND	0.0001
43248	7/25/2007	Trip #2 Day 2	ND	ND	0.0001
43267	7/26/2007	Trip #2 Day 3	ND	ND	0.0001
43268	7/26/2007	Trip #2 Day 3	ND	ND	0.0001

NOTE: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified in the analytical sensitivity column

PCME = Phase Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy, EPASM = Environmental Protection Agency Superfund Method

TABLE 2 Asbestos in Air Sampling Total Asbestos Results Raking – Upper Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	PCME	Total TEM EPASM	Analytical Sensitivity
0-253-0007	Rake Perimeter 1 AM	3/27/2007	Trip #1 Day 1 AM	0.001	0.001	0.001
0-253-0008	Rake Perimeter 2 AM	3/27/2007	Trip #1 Day 1 AM	0.002	0.002	0.001
0-253-0009	Rake Perimeter 3 AM	3/27/2007	Trip #1 Day 1 AM	ND	ND	0.001
0-253-0013	Rake AM High	3/27/2007	Trip #1 Day 1 AM	0.015	0.017	0.001
0-253-0027	Rake Perimeter 1 AM	3/28/2007	Trip #1 Day 2 AM	0.002	0.002	0.001
0-253-0028	Rake Perimeter 2 AM	3/28/2007	Trip #1 Day 2 AM	ND	ND	0.001
0-252-0029	Rake Perimeter 3 AM	3/28/2007	Trip #1 Day 2 AM	0.001	0.002	0.001
0-253-0033	Rake AM High	3/28/2007	Trip #1 Day 2 AM	0.007	0.010	0.001
0-253-0034	Rake AM High Dup	3/28/2007	Trip #1 Day 2 AM	ND	ND	0.001
43258	Rake Perimeter 3 PM	7/24/2007	Trip #2 Day 2 PM	ND	ND	0.001
43259	Rake Perimeter 1 PM	7/25/2007	Trip #2 Day 2 PM	0.002	0.003	0.001
43261	Rake PM High	7/25/2007	Trip #2 Day 2	0.007	0.022	0.001

NOTE: All results and analytical sensitivity in structures per cubic centimeter (s/cc)
All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified in the analytical sensitivity column
Perimeter 1 and 2 samples are downwind, Perimeter 3 samples are upwind
PCME = Phase Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

Positive results (above the analytical sensitivity) were detected in Lower Area raking perimeter samples #0-253-0064 and #43275. Total asbestos air concentrations are shown in Table 3 for samples associated with the raking ABS in the Lower Area. Results for the cross-section of analytes for samples associated with this event are shown in Table 11 on page 20.

TABLE 3
Asbestos in Air Sampling
Total Asbestos Results
Raking – Lower Area
Sapphire Mine Asbestos Site
Jackson County, NC
July 2009

Sample #	Location	Sample Date	Event ID	PCME	Total TEM EPASM	Analytical Sensitivity
0-253-0064	Rake – Perimeter 1 AM	3/29/2007	Trip #1 Day 3 AM	0.002	0.002	0.001
0-253-0065	Rake Perimeter 2 AM	3/29/2007	Trip #1 Day 3 AM	ND	ND	0.001
0-253-0066	Rake Perimeter 3 AM	3/29/2007	Trip #1 Day 3 AM	ND	ND	0.001
0-253-0067	Rake Perimeter 1 AM Dup	3/29/2007	Trip #1 Day 3 AM	ND	ND	0.001
43225	Rake Perimeter 2 AM	7/24/2007	Trip #2 Day 1 AM	ND	ND	0.001
43226	Rake Perimeter 3 AM	7/24/2007	Trip #2 Day 1 AM	ND	ND	0.001
43231	Rake AM High	7/24/2007	Trip #2 Day 1 AM	ND	ND	0.001
43275	Rake AM High	7/26/2007	Trip #2 Day 3 AM	0.038	0.062	0.001

NOTE: All results and analytical sensitivity in structures per cubic centimeter (s/cc)
All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified in the analytical sensitivity column
Perimeter 1 and 2 samples are downwind, Perimeter 3 samples are upwind
PCME = Phase Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

On July 26, 2007 the morning shoveling and raking events in the lower area were completed in very close proximity. One set of perimeter samplers was sufficient to surround both activities. The results from those perimeter samples are found in Table 5 on Page 11 with the nomenclature "shovel/rake".

Shoveling

REAC personnel completed three shoveling ABS events during each mobilization. Three personal and two perimeter samples were taken during each activity and a grand total of 27 samples, including four colocated samples, were sent to the laboratory for analysis.

Positive results (above the analytical sensitivity) were detected in Upper Area shoveling perimeter samples #0-253-0005, #0-253-0006, and #43229 and personal high volume samples #0-253-0011, #0-253-0069, #0-253-0070 and #43233. Total asbestos air concentrations are shown on page 9 in Table 4 for all samples associated with the shoveling ABS in the Upper Area. Results for the cross-section of analytes for all samples associated with this event are shown in Table 12 on page 22.

Positive results (above the analytical sensitivity) were detected in Lower Area shoveling perimeter samples #0-253-0030, #43239, #43269, #43270, #43271, and #43272 and personal high volume samples #0-253-0036, #43235, and #43274. Total asbestos air concentrations are shown on page 11 in Table 5 for all samples associated with the shoveling ABS in the Lower Area. Results for the cross-section of analytes for all samples associated with this event are shown in Table 13, page 24.

On July 26, 2007 the morning shoveling and raking events in the lower area were completed in very close proximity. One set of perimeter samplers was sufficient to surround both activities. The results from those perimeter samples are noted below with the nomenclature "shovel/rake".

Sieving

REAC personnel completed a total of five sieving ABS events over the two mobilizations. Three personal and two perimeter samples were taken during each activity and a grand total of 21 samples, including three duplicate samples, were sent to the laboratory for analysis. Perimeter samples from the afternoon of March 28, 2007 and the morning of July 25, 2007 were combined with the chiselling ABS and results pertaining to those samples can be found under the chiseling section. Due to heavy rainfall, only one personal sample was analyzed from the event of July 26, 2007.

Positive results (above the analytical sensitivity) were detected in Upper Area sieving perimeter samples #0-253-0014, #0-253-0015, #0-253-0016, and #0-253-0079 and personal high volume samples #0-253-0021 and #0-253-0085. Total asbestos air concentrations are shown on Page 13 in Table 6 for all samples associated with the sieving ABS in the Upper Area. Results for the cross-section of analytes for all samples associated with this event are shown in Table 14 on page 27.

Positive results (above the analytical sensitivity) were detected in Lower Area personal high volume samples #0-253-0043, #0-253-0044, #43256, #43263, and #43273. Total asbestos air concentrations are shown in Table 7 on page 14 for all samples associated with the sieving ABS in the Lower Area. Results for the cross-section of analytes for all samples associated with this event are shown in Table 15 on page 29.

On March 28, 2007 and July 25, 2007 the sieving and chiseling events in the lower area were completed in very close proximity. One set of perimeter samplers was sufficient to surround both activities. The results from those perimeter samples are found in Table 8 on Page 14 with the nomenclature "chisel/sieve".

TABLE 4 Asbestos in Air Sampling Total Asbestos Results Shoveling – Upper Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	PCME	Total TEM EPASM	Analytical Sensitivity
0-253-0004	Shovel Perimeter 1 AM	3/27/2007	Trip #1 Day 1 AM	ND	ND	0.001
0-253-0005	Shovel Perimeter 2 AM	3/27/2007	Trip #1 Day 1 AM	0.004	0.004	0.001
0-253-0006	Shovel Perimeter 3 AM	3/27/2007	Trip #1 Day 1 AM	0.001	0.001	0.001
0-253-0011	Shovel AM High	3/27/2007	Trip #1 Day 1 AM	0.006	0.012	0.001
0-253-0060	Shovel Perimeter 1 AM	3/29/2007	Trip #1 Day 3 AM	ND	ND	0.001
0-253-0061	Shovel Perimeter 2 AM	3/29/2007	Trip #1 Day 3 AM	ND	ND	0.001
0-252-0062	Shovel Perimeter 3 AM	3/29/2007	Trip #1 Day 3 AM	ND	ND	0.001
0-253-0063	Shovel Perimeter 1 AM Dup	3/29/2007	Trip #1 Day 3 AM	ND	ND	0.001
0-253-0069	Shovel AM High	3/29/2007	Trip #1 Day 3 AM	0.003	0.003	0.001
0-253-0070	Shovel AM High Dup	3/29/2007	Trip #1 Day 3 AM	0.010	0.017	0.001
43227	Shovel Perimeter 1 AM	7/24/2007	Trip #2 Day 1 AM	ND	ND	0.001
43228	Shovel Perimeter 2 AM	7/24/2007	Trip #2 Day 1 AM	ND	ND	0.001
43229	Shovel Perimeter 3 AM	7/24/2007	Trip #2 Day 1 AM	0.001	0.001	0.001
43233	Shovel AM High	7/24/2007	Trip #2 Day 1 AM	0.036	0.066	0.001

NOTE: All results and analytical sensitivity in structures per cubic centimeter (s/cc)
All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified in the analytical sensitivity column
Perimeter 1 and 2 samples are downwind, Perimeter 3 samples are upwind
PCME = Phase Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

Chiseling

REAC personnel completed a total of five chiseling ABS events over the two mobilizations. Chiseling ABS occurred only in the Lower Area where exposed rock walls were sampled. Three personal and two perimeter samples were taken during each activity and a grand total of 23 samples, including four duplicate samples, were sent to the laboratory for analysis. On March 27, 2007 personal sample #0-253-0023 was not sent to the laboratory for analysis due to a damaged cassette. Low volume pair #0-253-0022 was analyzed as the substitute sample. On July 24, 2007, personal sample #43237 was overloaded and not successfully analyzed by the laboratory.

Low volume pair #43236 was analyzed as the substitute sample. Perimeter sample #0-253-0074 was acquired on March 29, 2007, but was not sent to the laboratory due to sampler pump malfunction that resulted in collection of an insufficient sample volume.

Positive results (above the analytical sensitivity) were detected in all personal and perimeter samples through the five events EXCEPT for #0-253-0076, #43243, and #43252. Total asbestos air concentrations are shown on page 14 in Table 8 for all samples associated with the chiseling ABS in the Lower Area. Results for the cross-section of analytes for all samples associated with this event are shown in Table 16 on page 30.

On March 28, 2007 and July 25, 2007 the chiseling and sieving events in the lower area were completed in very close proximity. One set of perimeter samplers was sufficient to surround both activities. The results from those perimeter samples are noted below with the nomenclature "chisel/sieve".

A final data validation report for each mobilization for asbestos in air for a randomly chosen subset of positive samples can be found in Appendix A.

All air sampling field blanks and lot blanks were non-detect (below the analytical sensitivity) for asbestos. Sample numbers 0-253-0019, 0-253-0022, 0-253-0045, 0-253-0083, 43236, 43263, and 43275 had Total Asbestos results as PCME that approached or exceeded the Occupational Health and Safety Administration (OSHA) Permissible Exposure Limit (PEL) of 0.1structures per cubic centimeter (s/cc).

Soil Sampling for Asbestos

Soil sampling for asbestos was conducted using REAC SOP #2012, Soil Sampling. Laboratory analysis on all asbestos in soil samples was completed following California Air Resources Board (CARB) modified 435 method using Polarized Light Microscopy (PLM). The reporting limit was 0.25% asbestos in soil with qualifiers for trace amounts of less than 0.25% asbestos in soil. Samples were also analyzed by American Society for Testing and Materials (ASTM) D422-63(2002), Standard Test Method for Particle-Size Analysis of Soils and ASTM D6565-00(2005), Standard Test Method for Determination of Water (Moisture) Content of the Soil by the Time-Domain Reflectometry (TDR) Method.

TABLE 5 Asbestos in Air Sampling Total Asbestos Results Shoveling – Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	PCME	Total TEM EPASM	Analytical Sensitivity
0-253-0030	Shovel Perimeter 1 AM	3/28/2007	Trip #1 Day 2 AM	0.002	0.002	0.001
0-253-0031	Shovel Perimeter 2 AM	3/28/2007	Trip #1 Day 2 AM	ND	ND	0.001
0-253-0032	Shovel Perimeter 3 AM	3/28/2007	Trip #1 Day 2 AM	ND	ND	0.001
0-253-0036	Shovel AM High	3/28/2007	Trip #1 Day 2 AM	0.008	0.017	0.001
43235	Shovel PM High	7/24/2007	Trip #2 Day 1 PM	0.037	0.093	0.003
43238	Shovel Perimeter 1 PM	7/24/2007	Trip #2 Day 1 PM	ND	ND	0.001
43239	Shovel Perimeter 2 PM	7/24/2007	Trip #2 Day 1 PM	0.002	0.003	0.001
43240	Shovel Perimeter 3 PM	7/24/2007	Trip #2 Day 1 PM	ND	0.002	0.001
43269	Shovel/Rake Perimeter 1 AM	7/26/2007	Trip #2 Day 3 AM	0.001	0.003	0.001
43270	Shovel/Rake Perimeter 2 AM	7/26/2007	Trip #2 Day 3 AM	0.004	0.007	0.001
43271	Shovel/Rake Perimeter 2 AM Dup	7/26/2007	Trip #2 Day 3 AM	0.001	0.008	0.001
43272	Shovel/Rake Perimeter 3 AM	7/26/2007	Trip #2 Day 3 AM	0.001	0.002	0.001
43274	Shovel AM High Dup	7/26/2007	Trip #2 Day 3 AM	0.017	0.034	0.001

NOTE: All results and analytical sensitivity in structures per cubic centimeter (s/cc) All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified in the analytical sensitivity column Perimeter 1 and 2 samples are downwind, Perimeter 3 samples are upwind PCME = Phase Contrast Microscopy Equivalent TEM = Transmission Electron Microscopy EPASM = Environmental Protection Agency Superfund Method

Soil samples were taken by REAC personnel from locations where the four activity-based sampling events occurred. EPA Region IV personnel took four-point composite and grab samples from locations chosen throughout the Site at their discretion. The four-point composite samples were divided into one 8-ounce glass jar for California Air Resources Board (CARB) Method 435 Analysis by Polarized Light Microscopy (PLM) for determination of asbestos is soil, one 16-ounce jar for American Society for Testing and Materials (ASTM) Method D422-63 (2007), Standard Test Methods for Particle Size Analysis of Soils, and ASTM D2216-05, Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and rock by Mass. Both jars from one four-point composite sample were assigned identical sample numbers to signify the sample being acquired from one unique location. Unless specified by the WAM or EPA Region IV, soil samples were sampled as four-point composites, allowing for a detection limit of 0.25% asbestos in soil.

A total of 11 four-point composite and three grab soil samples were taken during the initial mobilization and four four-point composite samples were taken during the second mobilization. Table 9 on Page 17 shows positive results above the reporting limit of 0.25% for all but composite sample #0-253-0096 for asbestos in soil.

A copy of the final laboratory reports for soil analyses can be found in Appendix B.

FUTURE ACTIVITIES

No future activities are anticipated at this time.

TABLE 6 Asbestos in Air Sampling **Total Asbestos Results** Sieving – Upper Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	PCME	Total TEM EPASM	Analytical Sensitivity
0-253-0014	Sieve Perimeter 1 PM	3/27/2007	Trip #1 Day 1 PM	0.003	0.003	0.001
0-253-0015	Sieve Perimeter 2 PM	3/27/2007	Trip #1 Day 1 PM	0.005	0.010	0.001
0-253-0016	Sieve Perimeter 3 PM	3/27/2007	Trip #1 Day 1 PM	0.001	0.001	0.001
0-253-0021	Sieve - PM High	3/27/2007	Trip #1 Day 1 PM	0.022	0.032	0.001
0-253-0077	Sieve Perimeter 1 PM	3/29/2007	Trip #1 Day 3 PM	ND	ND	0.001
0-253-0078	Sieve Perimeter 2 PM	3/29/2007	Trip #1 Day 3 PM	ND	ND	0.001
0-252-0079	Sieve Perimeter 3 PM	3/29/2007	Trip #1 Day 3 PM	0.001	0.005	0.001
0-253-0080	Sieve Perimeter 1 Dup PM	3/29/2007	Trip #1 Day 3 PM	ND	ND	0.001
0-253-0034	Sieve - PM High	3/29/2007	Trip #1 Day 3 PM	0.005	0.016	0.001

NOTE: All results and analytical sensitivity in structures per cubic centimeter (s/cc)
All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified in the analytical sensitivity column
Perimeter 1 and 2 samples are downwind, Perimeter 3 samples are upwind
PCME = Phase Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

TABLE 7 Asbestos in Air Sampling **Total Asbestos Results** Sieving – Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	PCME	Total TEM EPASM	Analytical Sensitivity
0-253-0043	Sieve – PM High	3/28/2007	Trip #1 Day 2 PM	0.035	0.042	0.001
0-253-0044	Sieve – PM High Dup	3/28/2007	Trip #1 Day 2 PM	0.039	0.057	0.001
43256	Sieve – AM High	3/28/2007	Trip #1 Day 2 AM	0.070	0.130	0.001
43263	Sieve – PM High	3/28/2007	Trip #1 Day 2 PM	0.140	0.210	0.001
43273	Sieve – AM high Dup	3/28/2007	Trip #1 Day 2 AM	0.025	0.054	0.001

NOTE: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified in the analytical sensitivity column

Perimeter 1 and 2 samples are downwind, Perimeter 3 samples are upwind

PCME = Phase Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

TABLE 8 Asbestos in Air Sampling Total Asbestos Results Chiseling - Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	PCME	Total TEM EPASM	Analytical Sensitivity
0-253-0017	Chisel Perimeter 1 PM	3/27/2007	Trip #1 Day 1 PM	0.005	0.005	0.001
0-253-0018	Chisel Perimeter 2 PM	3/27/2007	Trip #1 Day 1 PM	0.008	0.019	0.001
0-253-0019	Chisel Perimeter 3 PM	3/27/2007	Trip #1 Day 1 PM	0.082	0.220	0.001
0-253-0022	Chisel PM Low	3/27/2007	Trip #1 Day 1 PM	2.10	5.40	0.045
0-253-0039	Chisel/Sieve Perimeter 1 PM	3/28/2007	Trip #1 Day 2 PM	0.003	0.007	0.001
0-253-0040	Chisel/Sieve Perimeter 2 PM	3/28/2007	Trip #1 Day 2 PM	0.003	0.011	0.001

TABLE 8 (continued) Asbestos in Air Sampling **Total Asbestos Results** Chiseling - Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	PCME	Total TEM EPASM	Analytical Sensitivity
0-252-0041	Chisel/Sieve Perimeter 3 PM	3/28/2007	Trip #1 Day 2 PM	0.001	0.002	0.001
0-253-0045	Chisel - PM Low	3/28/2007	Trip #1 Day 2 PM	0.290	0.450	0.004
0-253-0073	Chisel Perimeter 1 PM	3/29/2007	Trip #1 Day 3 PM	0.001	0.001	0.001
0-253-0075	Chisel Perimeter 2 PM	3/29/2007	Trip #1 Day 3 PM	0.003	0.006	0.001
0-253-0076	Chisel Perimeter 1 Dup PM	3/29/2007	Trip #1 Day 3 PM	ND	ND	0.001
0-253-0081	Chisel – PM Low	3/29/2007	Trip #1 Day 3 PM	0.070	0.150	0.012
0-253-0083	Chisel – PM High Dup	3/29/2007	Trip #1 Day 3 PM	4.00	25.0	0.212
43236	Chisel – PM Low	7/24/2007	Trip #2 Day 1 PM	0.280	0.990	0.004
43241	Chisel Perimeter 1 PM	7/24/2007	Trip #2 Day 1 PM	0.024	0.060	0.001
43242	Chisel Perimeter 2 PM	7/24/2007	Trip #2 Day 1 PM	ND	0.001	0.001
43243	Chisel Perimeter 3 PM	7/24/2007	Trip #2 Day 1 PM	ND	ND	0.001

NOTE: All results and analytical sensitivity in structures per cubic centimeter (s/cc)
All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified in the analytical sensitivity column
Perimeter 1 and 2 samples are downwind, Perimeter 3 samples are upwind
PCME = Phase Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

TABLE 8 (continued) Asbestos in Air Sampling Total Asbestos Results Chiseling - Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	PCME	Total TEM EPASM	Analytical Sensitivity
43249	Chisel/Sieve Perimeter 1 AM	7/25/2007	Trip #2 Day 2 AM	0.003	0.006	0.001
43250	Chisel/Sieve Perimeter 1 AM Dup	7/25/2007	Trip #2 Day 2 AM	0.002	0.004	0.001
43251	Chisel/Sieve Perimeter 3 AM	7/25/2007	Trip #2 Day 2 AM	0.001	0.002	0.001
43252	Chisel/Sieve Perimeter 2 AM	7/25/2007	Trip #2 Day 2 AM	ND	ND	0.001
43253	Chisel – AM High	7/25/2007	Trip #2 Day 2 AM	0.075	0.180	0.001
43254	Chisel – AM High Dup	7/25/2007	Trip #1 Day 2 AM	0.058	0.150	0.001

NOTE: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified in the analytical sensitivity column

Perimeter 1 and 2 samples are downwind, Perimeter 3 samples are upwind PCME = Phase Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

TABLE 9 Asbestos in Soil Sampling Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Event	Collection Method	Result (% asbestos)
0-253-0049	Chisel – Day 1	Trip #1 Soil	Composite	15.0
0-253-0050	Shovel – Day 2	Trip #1 Soil	Composite	2.25
0-253-0051	OSC – Upper Site	Trip #1 Soil	Composite	3.25
0-253-0052	OSC – Upper Site	Trip #1 Soil	Composite	5.50
	Dup			
0-253-0053	Rake – Day 1	Trip #1 Soil	Composite	7.0
0-253-0054	Rake – Day 1 Dup	Trip #1 Soil	Composite	6.25
0-253-0055	Rake – Day 2	Trip #1 Soil	Composite	3.75
0-253-0093	Chisel – Day 2	Trip #1 Soil	Composite	12.0
0-253-0094	Chisel – Day 3	Trip #1 Soil	Composite	9.25
0-253-0095	Shovel – Day 3	Trip #1 Soil	Composite	ND
0-253-0096	Rake – Day 3	Trip #1 Soil	Composite	2.75
0-253-0100	OSC – JLW2	Trip #1 Soil	Grab	4.25
0-253-0101	OSC – JLW3	Trip #1 Soil	Grab	3.50
0-253-0102	OSC – JLW1	Trip #1 Soil	Grab	1.75
43198	Upper Site	Trip #2 Soil	Composite	4.25
43200	Upper Site Dup	Trip #2 Soil	Composite	6.25
43202	Lower Site – Right	Trip #2 Soil	Composite	15.0
43204	Lower Site – Left	Trip #2 Soil	Composite	5.0

NOTE: All results reported in percent (%) asbestos
All samples have a reporting limit of 0.25%
All data imported directly from electronic data deliverables to preclude transcription errors
Results of ND indicate the analyte was not detected at or below the analytical sensitivity as specified
OSC = On-Scene Coordinator

TABLE 10
Asbestos in Air Sampling Results
Raking – Upper Area
Sapphire Mine Asbestos Site
Jackson County, NC
July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.001	0.001	
0-253-0007	Rake – Perimeter 1 AM	3/27/2007	Day 1	Total Amphibole	0.001	0.001	0.001
			AM	Total Asbestos	0.001	0.001	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.002	0.002	
0-253-0008	Rake - Perimeter 2 AM	3/27/2007	Day 1	Total Amphibole	0.002	0.002	0.001
			AM	Total Asbestos	0.002	0.002	
				tremolite (TR)	ND	ND	
		3/27/2007	Trip #1 Day 1 AM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	ND	ND	
0-253-0009	Rake – Perimeter 3 AM			Total Amphibole	ND	ND	
				Total Asbestos	ND	ND	
				Tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.015	0.017	
0-253-0013	Rake – AM High	3/27/2007	Day 1	Total Amphibole	0.015	0.017	0.001
			AM	Total Asbestos	0.015	0.017	
				Tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	Anthophyllite (AN)	0.002	0.002	
0-253-0027	Rake – Perimeter 1 AM	3/28/2007	Day 2	Total Amphibole	0.002	0.002	0.001
			AM	Total Asbestos	0.002	0.002	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	Anthophyllite (AN)	ND	ND	0.001
0-253-0028	Rake - Perimeter 2 AM	3/28/2007	Day 2 AM	Total Amphibole	ND	ND	
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & @ samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy

TABLE 10 (continued) Asbestos in Air Sampling Results Raking – Upper Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.001	0.002	
0-253-0029	Rake – Perimeter 3 AM	3/28/2007	Day 2	Total Amphibole	0.001	0.002	0.001
			AM	Total Asbestos	0.001	0.002	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.007	0.010	
0-253-0033	Rake – AM High	3/28/2007	Day 2	Total Amphibole	0.007	0.010	0.001
			AM	Total Asbestos	0.007	0.010	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
		3/28/2007	Trip #1	anthophyllite (AN)	ND	ND	
0-253-0034	Rake – AM High Dup		Day 2 AM	Total Amphibole	ND	ND	0.001
				Total Asbestos	ND	ND	
				Tremolite (TR)	ND	ND	
-				actinolite (AC)	ND	ND	
			Trip #2 Day 2 PM	anthophyllite (AN)	ND	ND	
43258	Rake – Perimeter 3 PM	7/25/2007		Total Amphibole	ND	ND	0.001
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	0.002	0.003	
43259	Rake – Perimeter 1 PM	7/25/2007	Day 2 PM	Total Amphibole	0.002	0.003	0.001
				Total Asbestos	0.002	0.003	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	0.007	0.022	
43261	Rake – PM High	7/25/2007	Trip #2 Day 2 PM	Total Amphibole	0.007	0.022	0.001
				Total Asbestos	0.007	0.022	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy

TABLE 11
Asbestos in Air Sampling Results
Raking – Lower Area
Sapphire Mine Asbestos Site
Jackson County, NC
July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.002	0.002	
0-253-0064	Rake – Perimeter 1 AM	3/29/2007	Day 3	Total Amphibole	0.002	0.002	0.001
			AM	Total Asbestos	0.002	0.002	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	ND	ND	
0-253-0065	Rake – Perimeter 2 AM	3/29/2007	Day 3	Total Amphibole	ND	ND	0.001
			AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
		3/29/2007	Trip #1 Day 3 AM	anthophyllite (AN)	ND	ND	
0-253-0066	Rake – Perimeter 3 AM			Total Amphibole	ND	ND	0.001
				Total Asbestos	ND	ND	
				Tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Rake – Perimeter 1 AM		Trip #1 Day 3 AM	anthophyllite (AN)	ND	ND	
0-253-0067	Dup	3/29/2007		Total Amphibole	ND	ND	0.001
	-			Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	ND	ND	
43225	Rake – Perimeter 2 AM	7/24/2007	Day 1	Total Amphibole	ND	ND	0.001
			AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	ND	ND	
43226	Rake – Perimeter 3 AM	7/24/2007	Day 1 AM	Total Amphibole	ND	ND	0.001
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy

TABLE 11 (continued) Asbestos in Air Sampling Results Raking – Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	ND	ND	
43231	Rake – AM High	7/24/2007	Day 1 AM	Total Amphibole	ND	ND	0.001
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	0.038	0.062	
43275	Rake – PM High	Rake – PM High 7/26/2007	Day 3	Total Amphibole	0.038	0.062	0.001
			AM	Total Asbestos	0.038	0.062	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column

Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

TABLE 12 Asbestos in Air Sampling Results Shoveling – Upper Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 1		Trip #1	anthophyllite (AN)	ND	ND	
0-253-0004	AM	3/27/2007	Day 1	Total Amphibole	ND	ND	0.001
			AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 2		Trip #1	anthophyllite (AN)	0.004	0.004	
0-253-0005	AM	3/27/2007	Day 1	Total Amphibole	0.004	0.004	0.001
			AM	Total Asbestos	0.004	0.004	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 3		Trip #1	anthophyllite (AN)	0.001	0.001	
0-253-0006	AM	3/27/2007	Day 1 AM	Total Amphibole	0.001	0.001	0.001
				Total Asbestos	0.001	0.001	
				Tremolite (TR)	ND	ND	
		3/27/2007	Trip #1 Day 1 AM	actinolite (AC)	ND	ND	
				anthophyllite (AN)	0.006	0.012	
0-253-0011	Shovel – AM High			Total Amphibole	0.006	0.012	0.001
				Total Asbestos	0.006	0.012	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 1		Trip #1	anthophyllite (AN)	ND	ND	
0-253-0060	AM	3/29/2007	Day 3	Total Amphibole	ND	ND	0.001
			AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 2		Trip #1	anthophyllite (AN)	ND	ND	
0-253-0061	AM	3/29/2007	Day 3	Total Amphibole	ND	ND	0.001
			AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

TABLE 12 (continued) Asbestos in Air Sampling Results Shoveling – Upper Area Sapphire Mine Asbestos Site Jackson County, NC Jul7 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 3		Trip #1	anthophyllite (AN)	ND	ND	
0-253-0062	AM	3/29/2007	Day 3	Total Amphibole	ND	ND	0.001
			AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 1		Trip #1	anthophyllite (AN)	ND	ND	
0-253-0063	AM Dup	3/29/2007	Day	Total Amphibole	ND	ND	0.001
			23AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
		3/29/2007	Trip #1	anthophyllite (AN)	0.003	0.003	
0-253-0069	Shovel – AM High		Day 3 AM	Total Amphibole	0.003	0.003	0.001
				Total Asbestos	0.003	0.003	
				Tremolite (TR)	ND	ND	
-		3/29/2007	Trip #1 Day 3 AM	actinolite (AC)	ND	0.001	
				anthophyllite (AN)	0.010	0.015	
0-253-0070	Shovel – AM High Dup			Total Amphibole	0.010	0.017	0.001
				Total Asbestos	0.010	0.017	
				tremolite (TR)	ND	0.001	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 1		Trip #2	anthophyllite (AN)	ND	ND	
43227	AM	7/24/2007	Day 1	Total Amphibole	ND	ND	0.001
			AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 2		Trip #2	anthophyllite (AN)	ND	ND	
43228	AM	7/24/2007	Day 1 AM	Total Amphibole	ND	ND	0.001
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy

TABLE 12 (continued)
Asbestos in Air Sampling Results
Shoveling – Upper Area
Sapphire Mine Asbestos Site
Jackson County, NC
July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	0.001	0.001	
	Shovel – Perimeter 3		Trip #2	anthophyllite (AN)	ND	ND	
43229	AM	7/24/2007	Day 1	Total Amphibole	0.001	0.001	0.001
			AM	Total Asbestos	0.001	0.001	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	0.036	0.066	
43233	Shovel – AM High 7/2	7/24/2007	Day 1	Total Amphibole	0.036	0.066	0.001
			AM	Total Asbestos	0.036	0.066	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)
All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column
Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy

EPASM = Environmental Protection Agency Superfund Method

TABLE 13 Asbestos in Air Sampling Results Shoveling Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
0.050.0000	Shovel – Perimeter 1	2/20/2005	Trip #1	anthophyllite (AN)	0.002	0.002	0.001
0-253-0030	AM	3/28/2007	Day 2 AM	Total Amphibole	0.002	0.002	0.001
				Total Asbestos	0.002	0.002	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 2		Trip #1	anthophyllite (AN)	ND	ND	
0-253-0031	AM	3/28/2007	Day 2	Total Amphibole	ND	ND	0.001
			AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	

TABLE 13 (continued) Asbestos in Air Sampling Results Shoveling - Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 3 AM		Trip #1	anthophyllite (AN)	ND	ND	
0-253-0032		3/28/2007	Day 2	Total Amphibole	ND	ND	0.001
			AM	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.008	0.017	
0-253-0036	Shovel – AM High	3/28/2007	Day 2	Total Amphibole	0.008	0.017	0.001
			AM	Total Asbestos	0.008	0.017	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
		7/24/2007	Trip #2	anthophyllite (AN)	0.037	0.093	
43235	Shovel – AM High		Day 1 AM	Total Amphibole	0.037	0.093	0.001
				Total Asbestos	0.037	0.093	
				Tremolite (TR)	ND	ND	
-				actinolite (AC)	ND	ND	
	Shovel – Perimeter 1	7/24/2007	Trip #2 Day 1 PM	anthophyllite (AN)	ND	ND	0.001
43238	PM			Total Amphibole	ND	ND	
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 2		Trip #2	anthophyllite (AN)	0.002	0.003	
43239	PM	7/24/2007	Day 1 PM	Total Amphibole	0.002	0.003	0.001
				Total Asbestos	0.002	0.003	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel – Perimeter 3		Trip #2	anthophyllite (AN)	ND	0.002	
43240	PM	7/24/2007	Day 1 PM	Total Amphibole	ND	0.002	0.001
				Total Asbestos	ND	0.002	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy

TABLE 13 (continued) Asbestos in Air Sampling Results Shoveling - Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
	Shovel/Rake – Perimeter		Trip #2	anthophyllite (AN)	0.001	0.003	
43269	DW#2 AM	7/26/2007	Day 3	Total Amphibole	0.001	0.003	0.001
			AM	Total Asbestos	0.001	0.003	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel/Rake – Perimeter		Trip #2	anthophyllite (AN)	0.004	0.007	
43270	DW #2 AM	7/26/2007	Day 3	Total Amphibole	0.004	0.007	0.001
			AM	Total Asbestos	0.004	0.007	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Shovel/Rake – Perimeter		Trip #2	anthophyllite (AN)	0.001	0.008	
43271	DW # 2 Dup AM	7/26/2007	Day 3 AM	Total Amphibole	0.001	0.008	0.001
				Total Asbestos	0.001	0.008	
				Tremolite (TR)	ND	ND	
		7/26/2007		actinolite (AC)	ND	ND	
	Shovel/Rake – Perimeter		Trip #2 Day 3 AM	anthophyllite (AN)	0.001	0.002	
43272	UW AM			Total Amphibole	0.001	0.002	0.001
				Total Asbestos	0.001	0.002	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	0.025	0.054	
43273	Shovel – AM High	7/262007	Day 3	Total Amphibole	0.025	0.054	0.001
			AM	Total Asbestos	0.025	0.054	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	0.017	0.034	
43274	Shovel –AM High Dup	7/26/2007	Day 3 AM	Total Amphibole	0.017	0.034	0.001
				Total Asbestos	0.017	0.034	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy

TABLE 14
Asbestos in Air Sampling Results
Sieving – Upper Area
Sapphire Mine Asbestos Site
Jackson County, NC
July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.003	0.003	
0-253-0014	Sieve-Perimeter 1 PM	3/27/2007	Day 1 PM	Total Amphibole	0.003	0.003	0.001
			·	Total Asbestos	0.003	0.003	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.005	0.010	
0-253-0015	Sieve – Perimeter 2 PM	3/27/2007	Day 1	Total Amphibole	0.005	0.010	0.001
			AM	Total Asbestos	0.005	0.010	
				tremolite (TR)	ND	ND	
		3/27/2007	Trip #1 Day 1 AM	actinolite (AC)	ND	ND	
				anthophyllite (AN)	0.001	0.001	
0-253-0016	Sieve – Perimeter 3 PM			Total Amphibole	0.001	0.001	0.001
				Total Asbestos	0.001	0.001	
				Tremolite (TR)	ND	ND	
				actinolite (AC)	ND	0.001	
			Trip #1	anthophyllite (AN)	0.022	0.032	
0-253-0021	Sieve – PM High	3/27/2007	Day 1 PM	Total Amphibole	0.022	0.032	0.001
			•	Total Asbestos	0.022	0.032	
				tremolite (TR)	ND	0.001	
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	ND	ND	
0-253-0077	Sieve – Perimeter 1 PM	3/27/2007	Day 1 PM	Total Amphibole	ND	ND	0.001
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)
All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column
Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

TABLE 14 (continued) Asbestos in Air Sampling Results Sieving – Upper Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	ND	ND	
0-253-0078	Sieve – Perimeter 2 PM	3/29/2007	Day 3 PM	Total Amphibole	ND	ND	0.001
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.001	0.005	
0-253-0079	Sieve – Perimeter 3 PM	3/29/2007	Day 3 PM	Total Amphibole	0.001	0.005	0.001
			•	Total Asbestos	0.001	0.005	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Sieve – Perimeter 1 PM		Trip #1	anthophyllite (AN)	ND	ND	0.001
0-253-0080	Dup	3/29/2007	Day 3 PM	Total Amphibole	ND	ND	
	•		•	Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Sieve – Perimeter 1 PM		Trip #1	anthophyllite (AN)	0.005	0.016	
0-253-0085	Dup	3/29/2007	Day 3 PM	Total Amphibole	0.005	0.016	
				Total Asbestos	0.005	0.016	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)
All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column
Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method

TABLE 15
Asbestos in Air Sampling Results
Sieving - Lower Area
Sapphire Mine Asbestos Site
Jackson County, NC
July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.035	0.042	
0-253-0043	Sieve – PM High	3/28/2007	Day 2 PM	Total Amphibole	0.035	0.042	0.001
				Total Asbestos	0.035	0.042	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1	anthophyllite (AN)	0.039	0.057	
0-253-0044	Sieve – PM High dup	3/28/2007	Day 2 PM	Total Amphibole	0.039	0.057	0.001
				Total Asbestos	0.039	0.057	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #2	anthophyllite (AN)	0.070	0.130	
43256	Sieve – AM High	7/25/2007	Day 2	Total Amphibole	0.070	0.130	0.001
			AM	Total Asbestos	0.070	0.130	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
	Sieve – PM High		Trip #2	anthophyllite (AN)	0.140	0.210	
43263		7/25/2007	Day 2 PM	Total Amphibole	0.140	0.210	0.001
			Day 21111	Total Asbestos	0.140	0.210	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)
All data imported directly from electronic data deliverable to preclude transcription errors
Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column
Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent
TEM = Transmission Electron Microscopy

TABLE 16
Asbestos in Air Sampling Results
Chiseling - Lower Area
Sapphire Mine Asbestos Site
Jackson County, NC
July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
	Chisel – Perimeter 1 PM	3/27/2007	Trip #1 Day 1 AM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	0.005	0.005	
0-253-0017				Total Amphibole	0.005	0.005	
				Total Asbestos	0.005	0.005	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1 Day 1 AM	anthophyllite (AN)	0.008	0.019	
0-253-0018	Chisel – Perimeter 2 PM	3/27/2007		Total Amphibole	0.008	0.019	0.001
				Total Asbestos	0.008	0.019	
				tremolite (TR)	ND	ND	
	Chisel – Perimeter 3 PM		Trip #1 Day 1 AM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	0.082	0.220	
0-253-0019		3/27/2007		Total Amphibole	0.082	0.220	
				Total Asbestos	0.082	0.220	
				Tremolite (TR)	ND	ND	
	Chisel – PM Low	3/27/2007	Trip #1 Day 1 PM	actinolite (AC)	ND	ND	0.045
				anthophyllite (AN)	2.00	5.10	
0-253-0022				Total Amphibole	2.10	5.40	
				Total Asbestos	2.10	5.40	
				tremolite (TR)	0.045	0.316	
	Chisel/Sieve – Perimeter	3/28/2007	Trip #1 Day 2 PM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	0.003	0.007	
0-253-0039	1 PM			Total Amphibole	0.003	0.007	
				Total Asbestos	0.003	0.007	
				tremolite (TR)	ND	ND	
0-253-0040	Chisel/Sieve – Perimeter 2 PM	3/28/2007	Trip #1 Day 2 PM	actinolite (AC)	ND	ND	
				anthophyllite (AN)	0.003	0.011	
				Total Amphibole	0.003	0.011	0.001
				Total Asbestos	0.003	0.011	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy

TABLE 16 (continued) Asbestos in Air Sampling Results Chiseling - Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
	Chisel/Sieve – Perimeter 3 PM			actinolite (AC)	ND	ND	
0-253-0041		3/28/2007	Trip #1 Day 2 AM	anthophyllite (AN)	0.001	0.002	0.001
				Total Amphibole	0.001	0.002	
				Total Asbestos	0.001	0.002	
				tremolite (TR)	ND	ND	
				actinolite (AC)	ND	ND	
			Trip #1 Day 2 AM	anthophyllite (AN)	0.290	0.450	
0-253-0045	Chisel – PM Low	3/28/2007		Total Amphibole	0.290	0.450	0.001
				Total Asbestos	0.290	0.450	
				tremolite (TR)	ND	ND	
	Chisel – Perimeter 1 PM	3/29/2007	Trip #1 Day 3 AM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	0.001	0.001	
0-253-0073				Total Amphibole	0.001	0.001	
				Total Asbestos	0.001	0.001	
				Tremolite (TR)	ND	ND	
	Chisel – Perimeter 2 PM	3/29/2007	Trip #1 Day 3 PM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	0.003	0.006	
0-253-0075				Total Amphibole	0.003	0.006	
				Total Asbestos	0.003	0.006	
				tremolite (TR)	ND	ND	
	Chisel – Perimeter 1 PM Dup	3/29/2007	Trip #1 Day 3 PM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	ND	ND	
0-253-0076				Total Amphibole	ND	ND	
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
	Chisel – PM Low	3/29/2007	Trip #1 Day 3 PM	actinolite (AC)	ND	ND	
				anthophyllite (AN)	0.070	0.151	
0-253-0081				Total Amphibole	0.070	0.151	0.001
				Total Asbestos	0.070	0.151	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy

TABLE 16 (continued) Asbestos in Air Sampling Results Chiseling - Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
	Chisel – PM High Dup	3/29/2007	Trip #1 Day 23AM	actinolite (AC)	ND	ND	0.210
				anthophyllite (AN)	4.00	25.0	
0-253-0083				Total Amphibole	4.00	25.0	
				Total Asbestos	4.00	25.0	
				tremolite (TR)	ND	0.210	
-			Trip #2 Day 1 AM	actinolite (AC)	ND	ND	
				anthophyllite (AN)	0.280	0.990	
43236	Chisel – Low PM	7/24/2007		Total Amphibole	0.280	0.990	0.004
				Total Asbestos	0.280	0.990	
				tremolite (TR)	ND	0.004	
	Chisel – Perimeter 1 PM	7/24/2007	Trip #2 Day 1 AM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	0.024	0.060	
43241				Total Amphibole	0.024	0.060	
				Total Asbestos	0.024	0.060	
				Tremolite (TR)	ND	ND	
	Chisel – Perimeter 2 PM	7/24/2007	Trip #2 Day 1 PM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	ND	0.001	
43242				Total Amphibole	ND	0.001	
				Total Asbestos	ND	0.001	
				tremolite (TR)	ND	ND	
	Chisel – Perimeter 3 PM	7/24/2007	Trip #2 Day 1 PM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	ND	ND	
43243				Total Amphibole	ND	ND	
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
43249	Chisel – Perimeter 1 AM	7/25/2007	Trip #2 Day 2 AM	actinolite (AC)	ND	ND	
				anthophyllite (AN)	0.003	0.006	
				Total Amphibole	0.003	0.006	0.001
				Total Asbestos	0.003	0.006	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc)

All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy

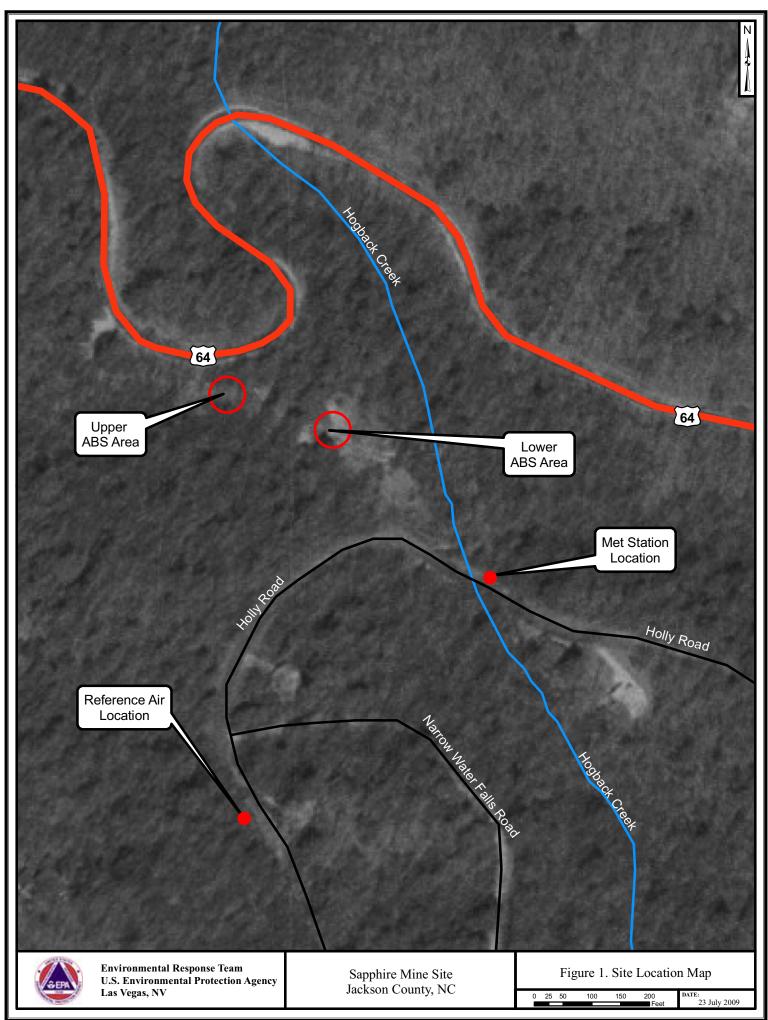
TABLE 16 (continued) Asbestos in Air Sampling Results Chiseling - Lower Area Sapphire Mine Asbestos Site Jackson County, NC July 2009

Sample #	Location	Sample Date	Event ID	Analyte	PCME	Total TEM EPASM	Analytical Sensitivity
				actinolite (AC)	ND	ND	
	Chisel/Sieve – Perimeter 1 AM Dup	7/25/2007	Trip #2 Day 2 AM	anthophyllite (AN)	0.002	0.004	0.001
43250				Total Amphibole	0.002	0.004	
				Total Asbestos	0.002	0.004	
				tremolite (TR)	ND	ND	
		7/25/2007	Trip #1 Day 2 AM	actinolite (AC)	ND	ND	0.001
	Chisel/Sieve – Perimeter			anthophyllite (AN)	0.001	0.002	
43251	3 AM			Total Amphibole	0.001	0.002	
				Total Asbestos	0.001	0.002	
				tremolite (TR)	ND	ND	
	Chisel/Sieve – Perimeter 2 AM	7/25/2007	Trip #2 Day 2 PM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	ND	ND	
43252				Total Amphibole	ND	ND	
				Total Asbestos	ND	ND	
				tremolite (TR)	ND	ND	
	Chisel – PM High	7/252007	Trip #2 Day 2 AM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	0.075	0.180	
43253				Total Amphibole	0.075	0.180	
				Total Asbestos	0.075	0.180	
				tremolite (TR)	ND	ND	
	Chisel – AM High Dup	7/25/2007	Trip #2 Day 2 AM	actinolite (AC)	ND	ND	0.001
				anthophyllite (AN)	0.058	0.150	
43254				Total Amphibole	0.058	0.150	
				Total Asbestos	0.058	0.150	
				tremolite (TR)	ND	ND	

Note: All results and analytical sensitivity in structures per cubic centimeter (s/cc) All data imported directly from electronic data deliverable to preclude transcription errors

Results of ND indicate that the analyte was not detected at of below the analytical sensitivity as specified in the sensitivity column Perimeter 1 & 2 samples are downwind, Perimeter 3 samples are upwind. PCME = Phased Contrast Microscopy Equivalent

TEM = Transmission Electron Microscopy
EPASM = Environmental Protection Agency Superfund Method



Appendix A
Final Data Validation Reports
Sapphire Mine
Verification/Validation Report
July 2009

Lockheed Martin Technology Services Environmental Services REAC 2890 Woodbridge Avenue Building 209 Annex Edison, NJ 08837-3679 Telephone 732-321-4200 Facsimile 732-494-4021



DATE: February 14, 2008

TO: Howard Schmidt, REAC Task Leader

THROUGH: Deborah Killeen, REAC Quality Assurance Officer/

FROM: Antonio LoSurdo, REAC QA/OC Chemist

SUBJECT: SAPPHIRE MINE - DATA VERIFICATION/VALIDATION

WORK ASSIGNMENT EAC00253 - VALIDATION REPORT

INTRODUCTION

A total of 30 samples (26 samples and four field blanks) were collected on March 27, 2007 on chain of custody (COC) records #0-253-04/04/07-0002 and #0-253-04/04/07-0003. Copies of the laboratory bench sheets were received to support the results reported on the laboratory's Certificates of Analysis. Twenty-two samples were analyzed using International Organization for Standardization (ISO) 10312:1995 and Annex E for PCM equivalents (PCME) asbestos fibers. Two activity-based low-volume samples (0-253-0010 and 0-253-0012) listed on COC #0-253-04/04/07-0003 were not analyzed because the corresponding high volume samples were analyzed. Samples 0-253-0022 and 0-253-0023 were not analyzed due to overloading.

An auto check between the NADES Excel spreadsheet and the Scribe project database were run using the CheckNades program that identified anomalies for sample numbers, sample volumes and missing information (Appendix A). The results provided in the electronic spreadsheets (Data Entry 1, Data Entry 2 and NADES Report) were compared with handwritten laboratory bench sheets. Information on the COC record and sample labels were used to identify discrepancies, which may impact the Certificate of Analysis Results Summary Table. Fifteen out of twenty-two samples showed the presence of one or more mineral structures and/or asbestos. All samples analyzed were verified/validated.

RESULTS

Since this project was not contracted by the Response Engineering and Analytical Contract (REAC), the laboratory could not be contacted with questions. The total number of asbestos structures on the laboratory's Certificates of Analysis was reported from the total number of EPASM structures from the 19,000x magnification. Likewise, the total number of PCME structures was reported from the total EPASM structures from the 10,000x magnification. Any discrepancies identified during the verification/validation process that impacted the total number of structures detected, analytical sensitivity, reported concentration, number of grid openings or the reported density on the laboratory's Certificates of Analysis are documented in Appendix B.

The following items were identified during the verification/validation process:

- There were no sample volume or sample number inconsistencies found between the NADES Excel spreadsheet and the SCRIBE project database.
- All samples were checked for error codes reported on the Data Entry 2 tab. Table 1.1 lists the samples with the associated error codes.
- The total number of structures detected for samples 0-253-0017, 0-253-0018 and 0-253-0019 did not agree with the handwritten laboratory bench sheets. Corrected results are summarized in Table 1.2 and corrected bench sheets are presented in Appendix C.
- 4. The PCME result for sample 0-253-0021 was calculated using a number of grid openings, which did not agree with the handwritten bench sheet. Corrected results are summarized in Table 1.2 and corrected bench sheets are presented in Appendix C.
- Sensitivity limits were verified for 100% of the analytical data. The samples met the 0.0001 structures per cubic centimeter (S/cc) for the background samples and the 0.001 S/cc for the activity-based samples and the associated perimeter samples.
- Four field blanks were collected on the two chains of custody records cited above. No samples were designated as lot blanks or laboratory batch blanks. Results for the field blanks were acceptable.
- The following equipment performance checks were not provided and could not be verified: TEM calibrations, camera constant calibrations, magnification calibrations @10,000x and 20,000x, 0.5- and 5-um on-screen calibrations and spot size measurements.
- Results of PE samples, replicate, duplicate and verified analyses were not included in the data package submitted by the laboratory.
- Additional inconsistencies included: Filter pore size was listed as 0.45 microns (μm) on the Certificates of Analysis vs. 0.800 um listed on the Data Entry 1 spread sheet for all samples; the Site/Project identifier code on the Data Entry 1 spreadsheets was listed as 0-235 vs. 0-253, the correct project code, and COC numbers on the Certificates of Analysis were 0-235-04/04/07-0002 and -0003 instead of 0-253-04/04/07-0002 and -0003.

Cc: Central Files WA #0-253

Dennis Miller, REAC Program Manager Joseph Soroka, DV & RW Group Leader

Electronic File: L: /Archive/REAC4/0253/D/VR/0253-DVRR1-021408

Table 1.1 Summary of Error Results for Asbestos in NADES WA # 0-253 Sapphire Superfund Site

Magnification:	10,000	X	19,00	0 X
	Data Entry 2	Number	Data Entry 2	Number
Sample Number	Error Code	Out	Error Code	Out
0-253-0015	D	1 grid	None	0
	Value error	1 grid		
0-253-0016	D	2 grids	None	0
	# Value	2 grids		
0-253-0017	D	5 grids	None	0
	DE	1 grid		
	E	2 grids		
	#Values	9 grids		
0-253-0018	D	2 grids	None	0
	DE	1 grid		
	#Values	6 grids		
0-253-0019	D	14 grids	E	3 grids
	DE	1 grid		
	E	2 grids		
	#Values	3 grids		
0-253-0021	D	3 grids	None	0
	DE	1 grid		
	#Values	4 grids		

NOTE:

The NADES report and Data entry 1 have no reported errors at both magnifications 10,000x and 19,000x for samples 0-253-0001 through -0009, 0-253-0011, 0-253-0013 through -0014, 0-253-0021 and 0-253-0089 through -0092.

Table 1.2 Summary of Recalculated Results for Asbestos in Air WA # 0-253 Sapphire (1) Superfund Site

	PCI	ME Analysis
	Original	Recalculated
Activity	Result	Result
Sample Number:	0-253-0017	0-253-0017
Volume (L)	2110	2110
Total Number of Structures	17	14
Analytical Sensitivity (s/cc)	0.00097	0.00097
Limit of Detection (s/mm2)	5.3	5.3
Reported concentration (s/cc)	0.01641	0.01358
Reported Density (s/mm2)	89.9	74.4
Sample Number:	0-253-0018	0-253-0018
Volume (L)	2200	2200
Total Number of Structures	11	13
Analytical Sensitivity (s/cc)	0.00100	0.00100
Limit of Detection (s/mm2)	5.7	5.7
Reported concentration (s/cc)	0.01097	0.012961
Reported Density (s/mm2)	62.7	74.1
Sample Number:	0-253-0019	0-253-0019
Volume (L)	2200	2200
Total Number of Structures	127	128
Analytical Sensitivity (s/cc)	0.00100	0.00100
Limit of Detection (s/mm2)	5.7	5.7
Reported concentration (s/cc)	0.12664	0.12762
Reported Density (s/mm2)	723.5	729.6
Sample Number:	0-253-0021	0-253-0021
Volume (L)	2200	2200
Number of Grid Openings	12	13
Analytical Sensitivity (s/cc)	0.00108	0.00100
Limit of Detection (s/mm2)	6.2	5.7
Reported concentration (s/cc)	0.03565	0.03300
Reported Density (s/mm2)	203.7	188.6

APPENDIX A
CheckNades Text File
Sapphire Mine
Verification/Validation Report
February 2008

0-235_Batta_0-253-0021_08-15-07_RTP-3563-PCME_TEM-EPASM_D_C1 (AGAIN).xls is correct

0-235_Batta_0-253-0091_08-14-07_RTP-3563-ISO_TEM-EPASM_D_C1 (AGAIN).xls is correct

0-235_Batta_0-253-0091_08-16-07_RTP-3563-PCME_TEM-EPASM_D_C1 (AGAIN).xls is correct

0-253 Batta 0-253-0001 08-14-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0001 08-14-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0002 08-17-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0002 08-17-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0003 08-20-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0003 08-20-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0004 08-19-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253_Batta_0-253-0004_08-19-07_RTP-3562-PCME_TEM-EPASM_D.xls is correct 0-253 Batta 0-253-0005 08-20-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0005 08-20-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0006 08-20-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0006 08-20-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0007 08-20-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0007 08-20-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0008 08-21-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0008 08-21-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0009 08-21-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0009 08-21-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0011 08-22-07 RTP-3562-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0011 08-22-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0013 08-23-07 RTP-3562-ISO TEM-EPASM D C1.xls is correct 0-253 Batta 0-253-0013 08-23-07 RTP-3562-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0014 07-16-07 RTP-3563-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0014 07-16-07 RTP-3563-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0015 07-18-07 RTP-3563-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0015 07-18-07 RTP-3563-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0016 07-21-07 RTP-3563-ISO TEM-EPASM D.xls is correct

```
0-253 Batta 0-253-0017 07-23-07 RTP-3563-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0017 07-23-07 RTP-3563-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0018 07-24-07 RTP-3563-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0018 07-24-07 RTP-3563-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0019 07-24-07 RTP-3563-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0019 08-13-07 RTP-3563-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0021 08-12-07 RTP-3563-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0021 08-15-07 RTP-3563-PCME TEM-EPASM D C1.xls is correct
0-253 Batta 0-253-0022 07-21-07 RTP-3563-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0022 07-21-07 RTP-3563-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0022 09-20-07 RTP-3563-ISO TEM-EPASM IA.xls is NOT correct
            Scribe Data Lab Data
  Volume:
                         2200
           681
0-253 Batta 0-253-0022 09-20-07 RTP-3563-ISO TEM-EPASM IA C1.xls is correct
0-253 Batta 0-253-0022 09-20-07 RTP-3563-PCME TEM-EPASM IA.xls is NOT correct
           Scribe Data Lab Data
  Volume:
0-253 Batta 0-253-0022 09-20-07 RTP-3563-PCME TEM-EPASM IA C1.xls is correct
0-253 Batta 0-253-0023 07-21-07 RTP-3563-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0023_07-21-07 RTP-3563-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0023 09-20-07 RTP-3563-ISO TEM-EPASM IA.xls is correct
0-253 Batta 0-253-0023 09-20-07 RTP-3563-PCME TEM-EPASM IA.xls is correct
0-253 Batta 0-253-0024 08-29-07 RTP-3564-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0024 08-29-07 RTP-3564-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0025 08-29-07 RTP-3564-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0025_08-29-07 RTP-3564-PCME_TEM-EPASM D.xls is correct
0-253 Batta 0-253-0026 08-30-07 RTP-3564-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0026 08-30-07 RTP-3564-PCME TEM-EPASM D.xls is correct
0-253 Batta_0-253-0027_08-30-07_RTP-3564-ISO_TEM-EPASM_D.xls is correct
0-253 Batta 0-253-0027 08-30-07 RTP-3564-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0028 08-30-07 RTP-3564-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0028 08-30-07 RTP-3564-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0029 08-30-07 RTP-3564-ISO TEM-EPASM D.xls is correct
```

0-253 Batta 0-253-0016 07-21-07 RTP-3563-PCME TEM-EPASM D.xls is correct

0-253 Batta_0-253-0029_08-30-07_RTP-3564-PCME_TEM-EPASM_D.xls is correct 0-253 Batta 0-253-0030 08-30-07 RTP-3564-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0030 08-30-07 RTP-3564-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0031 09-23-07 RTP-3564-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0031 09-23-07 RTP-3564-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0032 09-23-07 RTP-3564-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0032_09-23-07_RTP-3564-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0033 09-23-07 RTP-3564-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0033 09-23-07 RTP-3564-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0034 09-24-07 RTP-3564-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0034 09-24-07 RTP-3564-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0036 09-24-07 RTP-3564-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0036 09-24-07 RTP-3564-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0038 09-24-07 RTP-3564-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0038 09-24-07 RTP-3564-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0039 09-25-07 RTP-3565-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0039 09-25-07 RTP-3565-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0040 09-25-07 RTP-3565-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0040 09-25-07 RTP-3565-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0041 09-25-07 RTP-3565-ISO TEM-EPASM D.xls is NOT correct Scribe Data Lab Data Volume:

0-253_Batta_0-253-0041_09-25-07_RTP-3565-PCME_TEM-EPASM_D.xls is NOT correct Scribe Data Lab Data Volume: 2200 2220

0-253_Batta_0-253-0043_09-25-07_RTP-3565-ISO_TEM-EPASM_D.xls is NOT correct Scribe Data Lab Data Volume: 2200 2220

0-253_Batta_0-253-0044_09-26-07_RTP-3565-ISO_TEM-EPASM_D.xls is NOT correct Scribe Data Lab Data Volume: 2200 2220

0-253_Batta_0-253-0044_09-26-07_RTP-3565-PCME_TEM-EPASM_D.xls is NOT correct Scribe Data Lab Data Volume: 2200 2220

```
0-253 Batta 0-253-0045 10-04-07 RTP-3565-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0045 10-05-07 RTP-3565-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0046 09-27-07 RTP-3565-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0046 09-27-07 RTP-3565-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0047 09-27-07 RTP-3565-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0047 09-27-07 RTP-3565-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0048 09-27-07 RTP-3565-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0048 09-27-07 RTP-3565-PCME TEM-EPASM D.xls is correct
0-253_Batta_0-253-0057_09-30-07_RTP-3566-ISO_TEM-EPASM_D.xls is correct
0-253 Batta 0-253-0057 09-30-07 RTP-3566-PCME TEM-EPASM D.xls is correct
0-253_Batta_0-253-0058_09-30-07_RTP-3566-ISO_TEM-EPASM_D.xls is correct
0-253 Batta 0-253-0058 10-01-07 RTP-3566-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0059 10-01-07 RTP-3566-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0059 10-01-07 RTP-3566-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0060 10-02-07 RTP-3566-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0060 10-02-07 RTP-3566-PCME TEM-EPASM D.xls is correct
0-253_Batta_0-253-0061_10-02-07_RTP-3566-ISO_TEM-EPASM_D.xls is NOT correct
           Scribe Data Lab Data
  Volume:
0-253 Batta 0-253-0061 10-02-07 RTP-3566-PCME TEM-EPASM D.xls is NOT correct
           Scribe Data Lab Data
  Volume:
0-253 Batta 0-253-0062 10-02-07 RTP-3566-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0062 10-02-07 RTP-3566-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0063 10-02-07 RTP-3566-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0063 10-02-07 RTP-3566-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0064 10-02-07 RTP-3566-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0064 10-02-07 RTP-3566-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0065 10-03-07 RTP-3566-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0065 10-03-07 RTP-3566-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0066 10-03-07 RTP-3566-ISO TEM-EPASM D.xls is NOT correct
           Scribe Data Lab Data
 Volume: 2210
                        2100
0-253 Batta 0-253-0066 10-03-07 RTP-3566-PCME TEM-EPASM D.xls is NOT correct
           Scribe Data Lab Data
                        2100
```

Volume:

2210

0-253 Batta 0-253-0067 10-03-07 RTP-3566-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0067 10-03-07 RTP-3566-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0069 10-03-07 RTP-3566-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0069 10-03-07 RTP-3566-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0070 10-03-07 RTP-3566-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0070 10-03-07 RTP-3566-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0073 10-01-07 RTP-3567-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0073 10-01-07 RTP-3567-PCME TEM-EPASM D.xls is correct 0-253_Batta_0-253-0075_10-02-07_RTP-3567-ISO_TEM-EPASM_D.xls is correct 0-253 Batta 0-253-0075 10-02-07 RTP-3567-PCME TEM-EPASM D.xls is correct 0-253_Batta_0-253-0076_10-02-07_RTP-3567-ISO_TEM-EPASM D.xls is correct 0-253 Batta 0-253-0076_10-02-07 RTP-3567-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0077 10-03-07 RTP-3567-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0077 10-03-07 RTP-3567-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0078 10-03-07 RTP-3567-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0078 10-03-07 RTP-3567-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0079 10-03-07 RTP-3567-ISO TEM-EPASM D.xls is correct 0-253 Batta_0-253-0079_10-03-07_RTP-3567-PCME_TEM-EPASM_D.xls is correct 0-253 Batta 0-253-0080 10-03-07 RTP-3567-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0080 10-03-07 RTP-3567-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0081 10-06-07 RTP-3567-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0081 10-06-07 RTP-3567-ISO TEM-EPASM IA.xls is correct 0-253_Batta_0-253-0081_10-06-07_RTP-3567-PCME_TEM-EPASM_D.xls is correct 0-253 Batta 0-253-0081 10-06-07 RTP-3567-PCME TEM-EPASM IA.xls is correct 0-253 Batta 0-253-0082 10-01-07 RTP-3567-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0082 10-01-07 RTP-3567-ISO TEM-EPASM IA.xls is correct 0-253 Batta 0-253-0082 10-01-07 RTP-3567-PCME TEM-EPASM D.xls is correct 0-253 Batta 0-253-0082 10-01-07_RTP-3567-PCME TEM-EPASM IA.xls is correct 0-253 Batta 0-253-0083 10-07-07 RTP-3567-ISO TEM-EPASM D.xls is correct 0-253 Batta 0-253-0083 10-07-07 RTP-3567-ISO TEM-EPASM IA.xls is correct 0-253 Batta 0-253-0083 10-07-07 RTP-3567-PCME TEM-EPASM D.xls is correct

```
0-253 Batta 0-253-0083 10-07-07 RTP-3567-PCME TEM-EPASM IA.xls is correct
 0-253 Batta 0-253-0085 10-06-07 RTP-3567-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0085 10-06-07 RTP-3567-ISO TEM-EPASM IA.xls is correct
0-253 Batta 0-253-0085 10-06-07 RTP-3567-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0085 10-06-07 RTP-3567-PCME TEM-EPASM IA.xls is correct
0-253 Batta 0-253-0086 10-03-07 RTP-3567-ISO TEM-EPASM D.xls is correct
0-253_Batta_0-253-0086_10-03-07_RTP-3567-PCME_TEM-EPASM_D.xls is correct
0-253 Batta 0-253-0087 10-03-07 RTP-3567-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0087 10-03-07 RTP-3567-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0088 10-03-07 RTP-3567-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0088 10-03-07 RTP-3567-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0089 08-14-07 RTP-3563-ISO TEM-EPASM D.xls is correct
0-253 Batta_0-253-0089_08-16-07_RTP-3563-PCME_TEM-EPASM_D.xls is correct
0-253 Batta 0-253-0090 08-14-07 RTP-3563-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0090 08-16-07 RTP-3563-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0091 08-14-07 RTP-3563-ISO TEM-EPASM D C1.xls is correct
0-253 Batta_0-253-0091_08-16-07_RTP-3563-PCME_TEM-EPASM_D_C1.xls is correct
0-253 Batta 0-253-0092 08-16-07 RTP-3563-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0092 08-16-07 RTP-3563-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0097 10-03-07 RTP-3567-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0097 10-03-07 RTP-3567-PCME TEM-EPASM D.xls is correct
0-253 Batta 0-253-0098 10-03-07 RTP-3567-ISO TEM-EPASM D.xls is correct
0-253 Batta 0-253-0098 10-03-07 RTP-3567-PCME TEM-EPASM D.xls is correct
CheckNadesLabs.exe is NOT NADES file
ImportData.csv is NOT NADES file
RTP 3565 Hardcopy Report.pdf is NOT NADES file
RTP-3562 Hardcopy Report.pdf is NOT NADES file
RTP-3563 Hardcopy Report.pdf is NOT NADES file
RTP-3564-Hardcopy Report.pdf is NOT NADES file
```

RTP-3566 Hardcopy Report.pdf is NOT NADES file RTP-3567 Hardcopy Report.pdf is NOT NADES file

APPENDIX B Corrected Laboratory Certificates of Analysis Sapphire Valley Verification/Validation Report February 2008

BATTA LABORATORIES, INC.

A Certified MBE Company Delaware Industrial Park - 6 Garfield Way - Newark, DE 19713-5817

(302) 737-3376 - Fax (302) 737-5764

E.P.A. LAB ID# DE004



A.I.H.A./NLLAP #100448

NVLAP #101032

-0002

COC#:

0 235-04/04/07-0002

Page 1 of 3

Batch #:

RTP-3562-ISO

Test Method: ISO 10312:1995(E)

Prep Method: ISO 10312:1995(E) - Direct Transfer

Report Date:

9/19/2007

Sampling Data

Instruments: Scope Model: JEN 100CX II Magnification: 19,000 Operational Condition:

Det. Area: 10 mm² Det. Window: 0.006 mm Analyzer: Kevex

E-mail: battaenv@battaenv.com

BLI Project #: L443805

Project Name: 560605 - CDM Federal Programs

Sampling Location: not given

Date Sampled: 3/27/2007

Sampled by: client

Date Received: 7/5/2007

Grid Area (mm²): 0.009

Analytical Data

Effective Area (mm²): Date Prepped:

385

Media: MCE 7/13/07 Prepped By: A. Steiner Pore Size (µm): 0.45 Date Analyzed: 8/14/2007

Analyzed By: J. XU

	t	ab Data			A	nalytical Osta				Results
Lab Sample Number	EPA Sample Number	Analytical Counting Rule Identifier	Air Volume (L)	# of Grid Openings Area Analyzed (mm²)			Analytical Sensitivity (s/cc)	Limit of Detection (s/mm²)	Reported Concentration (s/cc)	
558069 /	0-253-0001	/ RTP-3582-ISO /	5400.00	0.7200	0/	None Detected	0,00010	1.4 /	< 0.00010	< 1.4
558089 /	0-253-0001	/ RTP-3562-PCME	5400.00	0.7200	0/	None Detected	0,00010	1.4	< 0.00010	< 1.4
558070 /	0-253-0002	/ RTP-3562-ISO /	5400.00	0.7200	0/	None Detected	0.00010	1.4	< 0.00010	< 1.4
558070 /	0-253-0002	/ RTP-3562-PCME	5400.00	0.7200	0/	None Detected	0.00010	1.4	< 0.00010	< 1.4
558071 /	0-253-0003 /	/ RTP-3582-ISO /	5400.00	0.7200	0/	None Detected	0.00010	1.4	< 0.00010	< 1,4
558071 /	0-253-0003	RTP-3562-PCME	5400.00	0.7200	0/	None Detected	0.00010	1.4	0.00010	< 1.4
558072	0-253-0004 /	RTP-3562-ISO /	2200.00	0.2160 /	0/	None Detected	0.00081	4.6	< 0.00081	< 4.6
558072 /	0-253-0004 /	RTP-3562-PCME	2200,00	13 0.1755	1/	Anthophyllite	0.00100	5.7 /	0,00100	5.7
558073 / 1	0-253-0005 /	RTP-3582-ISO /	2200,00	0.1755	4/	Anthophyllile	0.00100	5.7	0.00399	22.8
558073 / 0	0-253-0005 /	RTP-3562-PCME	2200.00	0.1755	1/	Anthophyllite	0.00100	5.7	0.00100	5.7

For one or more samples within this batch, it was not possible to meet the Analytical Sensitivity (0.0001 stoc) within the count rules of this method.

Analyst: J. XU



BATTA LABORATORIES, INC. A Certified MBE Company

Delaware Industrial Park - 6 Garfield Way - Newark, DE 19713-5817 (302) 737-3376 - Fax (302) 737-5764 Web: www.battaenv.com E-mail: battaenv@battaenv.com

E.P.A. LAB ID# DE004



ALHA/NLLAP #100448

NVLAP #101032

CERTIFICATE OF ANALYSIS

COC#:

0-255-04/04/07-0002

Test Method: ISO 10312:1995(E)

Page 2 of 3

Batch #

RTP-3562-ISO

Project Name: 560605 - CDM Federal Programs

Instruments:

Prep Method: ISO 10312:1995(E) - Direct Transfer

Report Date:

9/19/2007

Sampling Data

Analyzer: Kevex Det Area: 10 mm Det Window: 0.008 mm

Scope Model: JEM 100CX II. Magnification: 19,000 Operational Condition: Normal

BLI Project #: L443805

Sampling Location: not given

Date Sampled: 3/27/2007

Analytical Data

Sampled by: client

Date Received: 7/5/2007

Grld Area (mm²): 0.0135

Effective Area (mm²):

385 Media: MCE Pore Size (µm): 0.45

Analyzed By: J. XU

Date Prepped:

7/13/07 Prepped By: A. Steiner

Date Analyzed: 8/20/2007

Lab Data **Analytical Data** Results # of Grid Openings Total Number Analytical Limit of Reported Reported **EPA** Asbestos Lab Sample Analytical Counting Alr Sample Area Analyzed of Structures Mineral Type Sensitivity Detection Concentration Density Number Rule Identifier Volume (L) Number Detected Detected (mm2) (s/mm²) (s/cc) (s/cc) (s/mm²) 0-253-0008 / RTP-3582-ISO / 2310.00 0,1890 Anthophyllite / 0.00088 / 5.3 / 0.00088 13 RTP-3682-PCME / None Detected 0.00095 558074 / 0-253-0006 / 2310,00 0.1755 0 5.7 / < 0.00095 / < 5.7 14 Anthophyllite / 558075 / 1 0.00097 5.3 / 0-253-0007 / RTP-3582-ISO / 2110.00 0,1890 0.00097 / 5.3 14 0-253-0007/ RTP-3582-PCME / 2110.00 0 None Detected 0.00097 5.3 / 0.00097 / < 5.3 558075 / 0.1890 0-253-0008 / RTP-3562-ISO / 2310.00 0.1755 558076 / Anthophyllite / 0.00095 5.7 / 0.00190 / 11.4 13 558078 / 0-253-0008 / RTP-3562-PCME / 2310.00 0,1755 2 Anthophyllite / 0.00095 5.7 / 0.00190 / 11.4 13 0-253-0009 RTP-3582-ISO / 0.1755 None Detected / 0,00095 558077 / 2310.00 0 5.7 / 0.00095 / < 5.7 13 0-253-0009 RTP-3562-PCME 558077 / 2310.00 0.1755 5.7 / 1 Anthophyllite¹ 0.00095 0.00095 13 RTP-3562-ISO 0.00100 / 0.01197 558079 / 0-253-0011 / 2200.00 0.1755 Anthophyllits/ 68.4 12 5.7 / 13 0-253-0011 / RTP-3582-PCME / 2200.00 0.00100 / 0.1755 5 Anthophyllite 0.00499 / 28.5

Analyst: J. XU

Reviewed By: 18 1 01/a/34



E.P.A. LAB ID# DE004



AI.H.A./NLLAP #100448

NVLAP #101032

BATTA LABORATORIES, INC. A Certified MBE Company

Delaware Industrial Park - 6 Garfield Way - Newark, DE 19713-5817 (302) 737-3378 - Fax (302) 737-5764 Web: www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF ANALYSIS

COC#: 0-225-04/04/07-0002

Page 3 of 3

Batch #: RTP-3562-ISO Test Method: ISO 10312:1995(E) Report Date: Prep Method: ISO 10312:1995(E) - Direct Transfer 9/19/2007 Instruments: Scope Model: JEM 100CX II Magnification: 19,000 : Operational Condition: Normal Sampling Data Analyzer: Kevex Det Area: 10 mm Det Window: 0.008 mm BLI Project #: L443805

Project Name: 560605 - CDM Federal Programs Date Sampled: 3/27/2007

Sampling Location: not given

Sampled by: client

Date Received: 7/5/2007

Analytical Data

Effective Area (mm²):

385 Media: MCE Pore Size (µm): 0.45

Grld Area (mm²): 0.0135

Date Prepped:

7/13/07 Prepped By: A. Steiner

Date Analyzed: 8/23/2007

Analyzed By: J. XU

		.ab Data			An	alytical Data			Res	sults
Lab Sample Number	EPA Sample Number	Analytical Counting Rule Identifier	Air Volume (L)	# of Grid Openings Area Analyzed (mm²)		Asbestos Mineral Type Detected	Analytical Sensitivity (s/cc)	Limit of Detection (s/mm²)	Reported Concentration (s/cc)	Reported Density (s/mm²)
558081 /	0-253-0013	/ RTP-3582-ISO /	2200,00 /	13 0.1755	17 /	Anthophyllite /	0.00100	5.7 /	0,01695	98.9
558081 /	0-253-0013	/RTP-3562-PCME /	/ 2200.00	0.1755	14 /	Anthophyllite ,	/0.00100 /	5.7 /	0,01398	79.8

Analyst: J. XU

Reviewed By: 1 0 9/19/99

Volumes provided by client. Balta Laboratories does not accept liability for results reported in s/cc. This report pertains only to the items tested and does not constitute endorsement by NVLAP or any other U.S. government agency.



BATTA LABORATORIES, INC.

A Certified MBE Company

Delaware Industrial Park - 6 Garfield Way - Newark, DE 19713-5817 (302) 737-3378 - Fax (302) 737-5764 Web: www.battaenv.com E-mail: battaenv@battaenv.com

E.P.A. LAB ID# DE004



ALHA/NLLAP #100448

NVLAP #101032

CERTIFICATE OF ANALYSIS

COC#:

0-285-04/04/07-0003

Page 1 of 3

Batch #:

RTP-3563-ISO

Test Method: ISO 10312:1995(E)

Prep Method: ISO 10312:1995(E) - Direct Transfer

Report Date:

9/19/2007

Sampling Data

Instruments:

Scope Model: JEM 100CX II Magnification: 19,000 ... Operational Condition: Det: Area: 10 mm² Det. Window: 0.008 mm

BLI Project #: L443805

Analyzer: Kevex; Sampling Location: not given

Project Name: 560605 - CDM Federal Programs

Sampled by: client

Date Received: 7/5/2007

Analytical Data

Effective Area (mm²):

Date Sampled: 3/27/2007

385

Media: MCE

Pore Size (µm): 0.45

Grid Area (mm²): 0.0135 V

Date Prepped:

7/16/07 Prepped By: A. Steiner

Date Analyzed: 7/16/2007

Analyzed By: B. LI

	La	b Data			Ar	nalytical Data			Res	ults
Lab Sample Number	EPA Sample Number	Analytical Counting Rule Identifier	Air Volume (L)	# of Grid Openings Area Analyzed (mm²)		Asbestos Mineral Type Detected	Analytical Sensitivity (s/cc)	Limit of Detection (s/mm²)	Reported Concentration (s/cc)	Reported Density (s/mm²)
558082 🗸	0-253-0014 /	RTP-3563-ISO /	2200.00 /	0.1755	3 /	Anthophyllite ,	0.00100/	5.7 /	0.00299 /	17.1
558082	0-253-0014	RTP-3583-PCME /	2200,00 /	13 0,1755	3 /	Anthophyllite /	0.00100 /	5.7 /	0.00299 /	17.1
558083 /	0-253-0015 /	RTP-3563-ISO /	2200.00 /	13 0,1755	10/	Anthophyllite /	0.00100 /	5.7 /	0.00997/	57.0 /
558083 /	0-253-0015 /	RTP-3563-PCME	2200.00/	0.1755	8/	Anthophylite /	0.00100/	5.7/	0.00798	45.6
558084 /	0-253-0016 /	RTP-3563-ISO /	2200.00 /	13 0.1755	1./-	Anthophyllite/	0.00100/	5.7 /	0.00100 /	5.7 /
558084	0-253-0016	RTP-3563-PCME /	2200.00 /	13 0.1755	6 /	Anthophyllite /	0.00100	5.7/	0.00598	34.2 /
558085 /	0-253-0017 /	RTP-3563-ISO /	2110.00 /	14 0,1890	5 /	Anthophyllite /	0.00097 /	5,3 /	0.00483	26.5 /
558085 /	0-253-0017 /	RTP-3563-PCME /	2110.00/	0.1690	274	Anthophyllite /	0.00097	5.3	0.01358	per 74.4
558086 /	0-253-0018 /	RTP-3583-ISO /	2200.00 /-	13 0.1755	19	Anthophyllite /	0.00100 /	5.7	11 12 12 12 12 12 12 12 12 12	108.3
558086	0-253-0018 /	RTP-3563-PCME /	2200.00 /	13 0.1755	21/3	Anthophyllite /	0.00100/	5.7	0.012961	per 74.1

Analyst: B. Li Reviewed By:



E.P.A. LAB ID# DE004



A.LH.A./NLLAP #100448

NVLAP #101032

BATTA LABORATORIES, INC. A Certified MBE Company

Delaware Industrial Park - 6 Garfield Way - Newark, DE 19713-5817 (302) 737-3376 - Fax (302) 737-5764 Web: www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF ANALYSIS

Page 3 of 3

COC#: Batch #: 0-235-04/04/07-0003

253

RTP-3563-ISO

Test Method: ISO 10312:1995(E)

Prep Method: ISO 10312:1995(E) - Direct Transfer

Report Date:

9/19/2007

Sampling Data

Analyzer Kevex Det Area: 10 mm² 3 Det Window: 0.008 mm

Instruments: Scope Model: JEM 100CX II - Magnification: 19,000 Operational Condition: Normal

BLI Project #: L443805

Date Sampled: 3/27/2007 Analytical Data

Sampling Location: not given

Project Name: 560605 - CDM Federal Programs

385

Sampled by: client

Date Received: 7/5/2007

Effective Area (mm²):

Media: MCE

Pore Size (µm): 0.45

Grid Area (mm²): 0.0135

Date Prepped:

7/16/07 Prepped By: A. Steiner

Date Analyzed: 8/16/2007

Analyzed By: J. Xu

		Lab Data			Ar	alytical Data				Re	sults	
Lab Sample Number	EPA Sample Number	Analytical Counting Rule Identifier	Air Volume (L)	# of Grid Openings Area Analyzed (zmm²)			Analytical Sensitivity (a/cc)	Limit Detect (s/mm	ion	Reported Concentration (s/cc)	De	ported ensity (mm²)
558094 /	0-253-0092	/ RTP-3583-ISO	0.00 /	0.1350	0	None Detected	n/a	7.4	/	n/a	< 7.4	/
558094 ,	0-253-0092	/ RTP-3583-PCME	0.00	0.1350	0	None Detected	n/a	7,4	1	n/a	< 7.4	/

For one or more samples within this batch, it was not possible to meet the Australia Sensitivity (0.001 s/cc) within the count rules of this method.

Analyst: J. Xu

Reviewed By:



E.P.A. LAB ID# DE004



A.I.H.A./NLLAP #100448

NVLAP #101032

BATTA LABORATORIES, INC. A Certified MBE Company

Delaware Industrial Park - 6 Garfield Way - Newark, DE 19713-5817 (302) 737-3376 - Fax (302) 737-5764 Web: www.battaenv.com E-mail: battaenv@battaenv.com

253 CERTIFICATE OF ANALYSIS

COC#:

0-235-04/04/07-0003

Test Method: ISO 10312:1995(E)

Prep Method: ISO 10312:1995(E) - Direct Transfer

Report Date:

Page 2 of 3

Batch #:

RTP-3563-ISO

Instruments: Scope Model: JEM 100CX II - Magnification: 19,000 - Operational Condition: Normal

9/19/2007

Sampling Data

BLI Project #: L443805

Analyzer Kevex

Det Area: 10 mm2 Det Window: 0 008 mm

Date Sampled: 3/27/2007

Project Name: 560605 - CDM Federal Programs

Sampled by: client

Sampling Location: not given Date Received: 7/5/2007

Grid Area (mm²): 0.0135

Analytical Data Effective Area (mm²):

385

Media: MCE 7/16/07 Prepped By: A. STEINEF Pore Size (µm): 0.45 Date Analyzed: 7/24/2007

Analyzed By: B. Li

Results

Reported

Density

Date Prepped: **Analytical Data** Lab Data Analytical Limit of Reported # of Grid Openings Total Number Asbestos EPA Analytical Counting Lab Sample Alr Area Analyzed of Structures Mineral Type Sample Sensitivity Detection Concentration Rule Identifier Volume (L) Number Detected Detected Number (mm2) (s/cc) (s/mm²) 558087 0-235-0019 RTP-3563-ISO 2200.00 -0,1350 173 Anthophyllite 0.00130 7.4/

(s/cc) (s/mm²) 0.22426 / 1281.5 Actinolite 13 127 Anthophyllite 5.7/ 0.12762 220 729.6 558087 0-235-0019 RTP-3563-PCME 2200.00/ 0.1755 0,00100 Tremolite 13 0.1755 2200.00 / 5.7 / 558088 0-253-0021 / RTP-3563-ISO 32 Anthophytite 0.00100 0.03191 182.3 Actinolite 0.00/00 0.1820 25.7 0-253-0021 / RTP-3563-PCME 2200.00 / 33 V 0.03565 558088 / Anthophyllite 205T 18K.6 0.03300 0-253-0089 / RTP-3563-ISO 0.00 / 0.1350 7.4 / 556091 1 / Anthophyllite n/a n/a 7.4 10 558091 / 0-253-0089 / RTP-3583-PCME 0.00 / 0.1350 0 / None Detected n/a 74/ n/a < 7.4 10 7.4/ 0.00 / 0.1350 None Detected 558092 0-253-0090 / RTP-3563-ISO 0 / n/a n/a < 7.4 10 7.4/ 558092 0-253-0090 / RTP-3583-PCME 0.00 0,1350 None Detected 0 / n/a n/a < 7.4 10 7.4/ 558093 / 0-253-0091 RTP-3563-ISO 0.00 0.1350 None Detected 0 / nla n/a < 7.4 0-253-0091 / RTP-3563-PCME 0.00 / 0.1350 None Detected 74/ 0 558093 n/a n/a < 7.4

For one or more samples within this batch, it was not possible to meet the Analytical Sensitivity (0.001 s/cc) within the count rules of this method.

Analyst: B. Li and J. Xu

Reviewed By:

APPENDIX C Corrected Bench Sheets Sapphire Mine Verification/Validation Report February 2008

Enter Site or Project Name Here:	Here:	RTP-EPA Project		Site/Project identifier Code:	29870	F-factor Input Parameters.	ameters
State/Federal Site or Project Identifier.	ct Identifier.	EP-C-04-032			0-253	Indiana Done No.	
Laboratory name:	Batta	Client Sample Number:	0-253-0013	Number of grids prepared:	6	Fraction of used	Fraction of primary filter used
Instrument	JEM-100 CX II	Date received by lab:	/ T0/20/T0	Prepared by:	A. Steiner	Total (mL)	Total resuspension volume (mL)
Voltage (kV):	100	Lab Job Number:	KTP-3562-ISO	Preparation date:	70/13/07	Volv	Volume applied to secondary filter (mL)
Magnification:	000,61	Lab Sample Number:	\$58081/	Preparation Type: (D=Direct, inidirect, IA-indirect, ashed)	Q		
Grid opening area (mm²):	0.0135	Chain of Custody Number:	0-235-04/04/07-0002	Primary Filter Area (mm²):	385	Indirect Prep, Ashed	par
Scale: 1L=	1,000			Secondary Filter Area (mm²):		Fract	Fraction of primary filter used
Scale: 10 =	1,000	Sample Type: (FS-Field Sample, FB-Field Bank, LT=Lot Blank, QC=Lab QC)	FS	F- factor:	1,000	Tot	Total resuspension volume, pre-ashing (ml.)
Filter Size (mm):	385.000	QC Sample Type: (Not QC, LB-Lab Blank, RS-Recount Same,	/ DO 10N	Fittor Status: (AnAnalyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	٧	Vol	Volume applied to filter for ashing (mL)
Filter Pore Size (um):	0.800	RD, Recourt Diff., RP=Reprep., VA=Verified Analysis, IL=Interlab)	,	Analyzed by:	J.XU	Fa	Fraction of filter that was ashed
Method SOP (Ravision No.):	150 10312: 1995	Media: (Air, Dust, N/A)	/ Nr /	Analysis date:	08/23/07	Vol	Volume used to resuspend ashed residue (ml.)
Grid Storage Location:	2569K	Air volume (L) or dust area (cm²):	2200 /			Vol	Volume applied to secondary filter (mL)

COMMENTS

If sample was analyzed using more than one TEM instrument, enter TEM instrument details below. instrument #3

Instrument: Voltage (IVV): Magnification:

If sample was analyzed by more than one analyst or across multiple analysis dates, enter analysis datails below.

Analyzed by:
Analyzed by:
Analyzed date:

MPORTANT NOTE: If this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

X 000'01

RTP-EPA Project
National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

| 0 | | | E | | 32 | 9 8 | | 8
 | ğ | (9) | 5 | | | | | | | | |
 | | | | | < 1 | = | | | | | |
 | 200 | B 1 | 3 8 | H | | ě. | | |
 | | | | | | |
 | |
|---|---|------------------------------------|-----------------|--|----------------------|--|---
--|--|-----------|--------------------|--|--
--|--|--|--|---|---|-----|----------------|---------------------
--|---------------------|---|-------------------------|--|---------------|-----------------|--------------------|---|--
--	--	---	--	----------------------------
--	----------------			
		CODE		
 | | | | | | |
 | | | | | | | | | | | |
 | | | _ | | | _ | _ | _ | _
 | | _ | _ | | | _ | _
 | |
| Sample Type Feld Sample GC Sample Type Not OC Sample Status Acalyzed Analyze Date 7750/2007 | 日本は日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日 | Comments | 大学 はないないないない | STREET, STREET | Contract of the last | Name of Persons and Persons an | cleavage fiber | THE REAL PROPERTY AND PERSONS ASSESSMENT OF THE PERSONS ASSESSMENT OF | | | | The state of the s | | THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWIND TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN | | THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO | The state of the s | | | | | Company and Company | Commence of the Commence of th | III MANAGEMENTALISM | では は は は は は は は は は は は は は は は は は は | GREENSTEIN SCHOOL STATE | Control of the Contro | | | TOTAL PROPERTY. | STATES OF SALES CALLED | STEP-ONE INDICATE AND PROPERTY. | The state of the s | | SALES SECTION OF SALES | THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW | STANDARD STANDARD STANDARD | | | SON STREET, ST | THE PERSON NAMED IN | | STATE OF THE PARTY | |
| e Type
Status
de Deta | | EDS | | Stores | | | N. | Mental
 | | | | | | | Carlot Land
 | | State C | | | | 1000 | St. Tr | P. Co | EL COL | STEERS | 100 | Department of the last
 | | | | 0.00 | Shrings | To the second | The same | Total Control |
 | 5 | | | 1000 | 100 | |
 | |
| Sample
Sample
Analys | Table . | Photo | Spirits. | | 100 | 1 | STATE OF | SERVICE OF
 | | | | | | | 1000
 | O NEW | | | | | | 4.00 | Children of | 0.85 | 10000 | 0.5555 | La Contract
 | | | | No. | STATE OF | | - | 記を行 | 3
 | | | 100 | directors | SVC | 1000 |
 | 1 |
| o | | Skatch Photo EDS | 1 | | 1 | | 1 | September 1
 | | | | | | |
 | | | | | | - 2 | ASSESS. | 2000 | STATE OF | A COUNTY | 100 |
 | | | 100 | 100 | Section 1 | No. of Lot | Carlo | 4.000 | all of
 | | | Spirit S | CATTLE S | Septiment of the least | |
 | |
	COLUMBIA D	Other Mineral Description	Constitution of	The same of		INTERNAL PROPERTY.	DATE OF THE PARTY	Selfantana				STANSON.									A CONTRACTOR	Control of	48000	DANKET KE	PP-2 PRE	PSGODES	STATE STATES	The State of			Sartness		The second	STATE OF THE PARTY	能はいかり	Advantable.				Properties	ASSESSED AND ADDRESS OF THE PARTY OF THE PAR	The same	ACTION NO.	0
	THE PERSON	Mineral Type (c)	+	N .	W	The same of	AN	STREET, STREET	SECTION SECTIO		THE REAL PROPERTY.	SERVICE SERVICES		THE REAL PROPERTY.	Total Sale		A				Charles of the	d Programme of the	100	SCHOOL STATE	2000年1月	をを記	ACTION AND ADDRESS OF			The second	edition Pare	STATE OF STA	1000000	18-10/02-15-11	elastic trans	STATE OF THE PARTY		The state of the s	A 1 44 (17)	NUMBER SER	III SECTION IN		OCTOBER OF	Annual cons
Ar Direct	攤	Identification N Code (b)		YOX	K	腦拍	ADX //	THE REAL PROPERTY.	A Milantification of		SERVICE SHIPS	Sales September 1975	MINORETA 1	Name and Address of the Owner, where	Total Section								The second	Control of the last	THE PERSON NAMED IN	N-3000	1	A COLUMN TOWN	STATE OF STREET	16000	STATE OF	1000	The second second	Market Coll	9000000		ACCOUNT.		SALESTANIAN STANIAN	が記録が	THE PARTY	Service of the servic		Mary Control
Meda Ar. Sample Prop Direct	de Dale, en	Cimenatoris (a) Id	ISI		0.65	SECTION SECTIO	2.6 /		COUNTRIES IN		SARING III	STATE OF STA	MAKEDS: N	A STATE OF								Charles of		S. E. S. C.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		CALIFORNIA CO.	1			D. CAROLE B.				Section 1					T BYD PY	Timber I			P. Contraction
San	DESIGNATION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED	Cimena	24.5	24.5	21	STATE OF THE PERSON NAMED IN	80	CORRES	STATE OF THE PARTY			designation	SERVICE SERVIC		Chellens						200		1000	100001	CONTRACTOR OF THE PARTY OF THE					1000				NAC STREET	ALC: UNITED AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO					1000	9			
	Open - Biblio	Total	0	1	2/	SANCE AND IN	3	1000																																				
 | SALANTA III | | | SAME AND US | | ACTION IN | A CONTRACT
 | | | | | | Table Control | 1 | 1000000 | CONTRACT | A | SHACING. | Geo Paris
 | | | 2000 | 1000 | ASSESSED BY | | 100000 | 10 Sept. | 24 373
 | | | 20000 | 150010054 | 4-X-07B | |
 | Day Char |
| | Altered . | No. of Structures
Primary Total | O A | 3 | 0 | 劉 | 3 | STATE OF THE PERSON NAMED IN | STATE STATE OF | TAGAMENT. | SECOND ! | STATES OF | | STABILITY | 1700 | | 200 | | | | | 1 | 20000 | WEST STATE | Second. | - | THE PARTY OF | | | 10800 | 5000 | 100000 | | 71.00 | 100 | 1 | 2000 | | | 20,000,000 | 10(5)(1) | The state of the s | 1000 | 1 |
| 59082 | I BI COUL | Structure | MD15 | MF | MF / | N | 2 | ND CM | QV | ON ON | QN | QV | / ON | NO. | NE COLUMN TO SERVICE STATE OF THE PERSON STATE | | | | | | 1700 - 1000 | | - Property | 17557 | Company of the | 1 | C.C.C. Section | | | 1000 | 100000000000000000000000000000000000000 | G I I | | THE REAL PROPERTY. | 2007-0-20 | 100000 | | | Transpire | Secretary of | はまること | The same of | | St. 126. 14 |
| CLIENT SAMPLE ID: 0-253-0014: LAB SAMPLE ID: 659082: Data Entry by: 8. U | THE DETECT | Grid
Opaning | ĮQ. | М | 000 | 98 | 88 | - 84
 | 83 | 200 | 3 | 99 | 999 | 2 |
 | | | | | | | 100 | 100 | 1200 | Sp 100 | | Certificant and
 | | | To the contract of | 100 | Secondary. | | | 100 COR | 1
 | | | SAM A | Charles and | | 1 |
 | Section 1 |
| CLIENTS | Data | Grid | 100 | | 1 | | | ST. LOW | 1 | 2 6 | 2 | 2 | 23 | S | 3 | 3 5 | ? | 3 | - | 0 | 2 | 7 | 7 | | 0.75 | | Children of the Children of th | | | 1000 | | 11 983-14 | | 1 | Cold of | 5 | | | 1 | 0 | 115000 | | | 10111 |

ERROR CHECK

JK - No errors found

BREVATED NOTES.

Enlar dimensions either in absolute units n) or in screen units. If reported as wan units, confirm that the Langth & mansion Scales are set as appropriate.

See Arrex D of ISO10312 for nitfication codes.

Valid Mineral Types;

AC actinosis
AM amodis
AN authophysiss
CH drysolds
CR condololis
TR tremodis
TR tremodis
LA Libby aretyblose
OA other emphibole
NAM non-astbasios maiarisi
Amosis Solid solution series: Amostile, curreinglonies gruneries

other mineral type (specify in "other mineral description" field) OM Description Standard Selections: em-Act Solid solution series: Tremolite-Actinolite

Sepicifie Wollastanile Winchile Richtenile

) Populate this field only if sample was salyzed using more than one instrument, by one then one analyst, or ecross muliple ralysis dates.

SHOR CODES:

Primary/Total enity is not sequential Mineral class type is not valid

Structure dimensions are missing or are not valid

total # structures with complex do not match information provided in s # structures > 5um with complex do not match information provided is 00

structure type with complex does not match information provided in a identified as non-countable structure (total = 0) without comment

X 0000101

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Design by Py, M. STEINER CAD, M. B. L. Andrein Date (1972077) 10 Colored Stocks Prince Canada (1972077) 11 Colored Stocks Prince Canada (1972077) 12 Colored Stocks Prince Canada (1972077) 13 Colored Stocks Prince Canada (1972077) 14 Colored Stocks Prince Canada (1972077) 15 Colored Stocks Prince Canada (1972077) 16 Colored Stocks Prince Canada (1972077) 17 Colored Stocks Prince Canada (1972077) 18 Colored Stocks Prince Canada (1972077) 19 Colored Stocks Prince Canada (1972077) 10 Colored Stocks Prince Canada (1972077) 11 Colored Stocks Prince Canada (1972077) 12 Colored Stocks Prince Canada (1972077) 13 Colored Stocks Prince Canada (1972077) 14 Colored Stocks Prince Canada (1972077) 15 Colored Stocks Prince Canada (1972077) 16 Colored Stocks Prince Canada (1972077) 17 Colored Stocks Prince Canada (1972077) 18 Colored Stocks Prince Canada (1972077) 19 Co	Annual Entry by A. A. Greek Brit Coll Coll Coll Coll Coll Coll Coll Col	禁事 しゅりかけい	ACTION OF		0.0	Aby: B	П	Charles and		7	Analysis Date	7/18/2007
Color Stocks Color Col	Grid Opening (C) C1 C1 C1 C2	S 0 0 0 0 0	NO STATE OF	Carried Street			THE PERSON NAMED IN					
Column C	Openfig. 20 C C C C C C C C C C C C C C C C C C	1 8 0 0 0	THE PERSON NAMED IN	STATISTICS.	The Parket of the Parket	A Cale: 8	TSF CODY	STORY MARKET	Committee of the	With State of the last	Barrado	The second secon
C1 MO22	28888888888888888888888888888888888888	1000	a of Strue		Olmansio	m	_	Mineral Type	Other Mineral Description	Steatch D	blank = no	Comments
CC1 MB	20000000000000000000000000000000000000	8 8 9	-	£	100.25	25	/ YOY	AN		11	Store South	ON OWNER OF THE PERSON OF THE
C: MB	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		100		100	2.5	ADX /	AN	ないないのである	11	1000	· · · · · · · · · · · · · · · · · · ·
C 1 MF	268777877777888	-	State A	0.1	27.5	1	YOY ,	AN	Children and the	1/1	GR 13 (80)	A LONG COLUMN TO SERVICE AND ADDRESS OF THE PARTY OF THE
CG NO	26 27 27 27 27 27 27 27 27 27 27 27 27 27				7	0.7	ADX '	AN	THE PARTY	and the last	THE STREET	not peme
C 7 MOI 2 1 80 17 ANY ANY 11 C 7 MOI 2 1 80 17 ANY ANY 11 C 8 MO 2 8 ANY ANY 11 C 8 MO 2 8 ANY ANY 11 C 8 MO 2 8 ANY ANY ANY 11 C 8 MO 2 8 MO 2 8 ANY	26 B B B B B B C C C C C C C C C C C C C	0 / 1888	MUSEC 15	Depleted a	鄙	THE PARTY I	THE SHOPPING	Nagarasan	SOUTH SERVICE	BROMER SO	William Street Line	
C 7 MO11 2 1 25 25 11 MOX MAY 11 C 7 MO11 2 1 25 25 21 MOX MAY MAY 11 C 7 MO1 MO	00 B B B B B B B B B B B B B B B B B B		10000	OSCIPLIA D	좕	10.30mm	Apx	SMAKE	Name and Address of the Owner, where	MAN PER PE	DESIGNATION OF THE PERSON	
C	00 B B B B E E E 6 C C	4	7 7		200	1/	YOY '	AN .		10		
E3 ND D3 ND D6 ND D7 ND D8 ND D8 ND D9 ND	010 B B D B B E E E E	-		3/	88	2.5	VOV	N. N.			The state of the s	
EST ND DOS ND DO	2 2 4 8 2 2 2	-	3 /	1 4	200	4	VOX V	N. N.		1		The second property of
D2	28866	D. C.	STATE OF	SE S	THE PERSON		THE REAL PROPERTY.	STATE OF THE PARTY	No. of Lot, House, etc., in case, and the case, are the case, and the case, and the case, and the case, and the ca			
DO NO	00 D8 D10	O		STATISTICS OF	MATHEMA	THE REAL PROPERTY.	Series Series	AND NAME OF		STATE OF	OUN TRANS	
D4 ND D6 ND D6 ND D7 ND	20 00 00	Die C	No. Company	Townson in			SHAM SUPPLY	STATE OF THE PARTY OF	Bernand St.		ASSESS SERVICES	
D6 ND ND ND ND ND ND ND	D6 D10	O THE	MARKE AN	ACCEPTED A	STATE OF THE PERSON	SEPREMBER 1	を の の の の の の の の の の の の の の の の の の の	PERSONAL PROPERTY.	AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON	Part of the		
D8 ND H ND H MO1 H MS 22 10 ADX AN H CB 31 13 ADX AN H CB 31 13 ADX AN H CB 3 12 0.15 ADX AN	D80	CO.	15000E	NAME AND POST OF	STATE OF	THE PARTY	2 をなられる	THE PROPERTY.	がおける世界	BESSES OF		CONTRACTOR DESIGNATION OF THE PERSON OF THE
010 NO 1 4 22 10 7 ADX / AN / NO 1 4 6 22 3 7 ADX / AN / A	010	100 C	20 CO 80	NECESSARY OF	CONTROL OF	SECOND STATE	MANAGE SE	NATIONAL PROPERTY.	OCSDESIONS OF	STATISTICS IN	TANKS MANAGEMENT	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWI
H4 MP1 4 5 22 10 ADX AN	200	1	-	The same of	County of the		STATE STATE OF THE PARTY OF THE	THE PERSON NAMED IN				
H4 CD3		g.	1	-	7 00		1	1	-			
H4 CB	He	1		1	177	100	Y Y		The second secon			CHENNING IIDEL
H4 CD33 5 31 77 ADX 1 H4 CB 7 1 8 1 13 ADX 1 H4 CB 8 7 1 8 1 12 0.15 1 ADX 1 H4 CF 8 7 12 0.15 1 ADX 1 H4 CF 8 7 12 0.15 1 ADX 1 H4 CF 8 7 12 0.15 1 ADX 1 A	14	Н	1	0	777	3	ADX *	M	0			THE PROPERTY OF THE PARTY OF TH
H4 CB 0 11 13 ADX H4 CB	H4	Ų.	10		316	1.1	, XGY	AN f	CONTRACTOR			
H4 CB 7 7 8 6 0.75 ADX / H4 CF 8 7 12 0.15 ADX / H4 CF 8 12 0.15 ADX /	H4	100	300	9 /	31/	13/	, ADX	AN f	STORY STORY	STATES IN	STATE SHAPE	A STATE OF S
H4 CF 8.7 12 / 0.15 / AOX /	H4	9		11	1 8	0.75 /	ADX /	AN I	The State	0 20011	CENTRAL DIGINAL	THE RESERVE AND ADDRESS OF THE PARTY OF THE
	14	1		8 /	12/	0.15 /	/ XOV	AN	1	STATE OF	22 to 016	STATE OF THE PARTY
				-			1000	135 - 13/w	Man Could	1	S074 DCII.	のなるとなっているのでは
	8	1000	0	-	10000	Section 5	ATO OF THE	11/20	WATER ARM	1	025000000	Commence of the Party of the Pa
	9		-	The same of		100	Sec. 555 (40) 40	Combined	The State of the	ALTER O	leto 1 cvits	The state of the s
	1		100			1000	1	A CONTRACTOR	1	Cont. Land	1000	CONTRACTOR STATE OF THE PARTY O
		-	-	1			No.	A	The same of the same of	-	STATE STATE	The state of the s
		-	1				1			-		
		-	1	1								
									1000000			
							TO STATE OF THE PARTY OF THE PA					
							The state of the s	No. of Lot, Lot,		C.	NO.	NATION OF THE PERSON OF THE PE
		100	0.44	A 100			The state of the s		No. of Control of Control	1000	25 Print (100 ST)	A STANDARD STANDARD
		1014	1	100	100	Deci serie	Charles of	ST	The second	CT WAR	Part of the second	TO STATE OF THE PARTY OF THE PA
	THE RESERVE	1	1	-	Section.	A THE	A Mar	1000		10000	Land Liver	のないれておけるというでは 日本の
	The second second	100	-	20000		The Party Labor.	The state of the s	The state of the state of	The street of the	Total Control	Active services	The state of the s
			1									
			1				The same					
		-	000	SCHEEN STATES	Part April	THE REST	S. S. S. S. S. S.	94971129*	Married Control	THE STATE OF	S 212 DHEES	A STATE OF THE PARTY OF THE PAR
		CA MILE	36	12000			201111	1000-115	F-2013 SE-15	TOTAL PROPERTY.	THE PARTY	STATES STATES OF
	State of the last	The state of	0	100	Carlo Carlo	Samuel S	L'STATE OF	Parameter Contract	10 mg - 1 mg - 10 mg	S SHOOTS	STATE OF THE PERSON	Constitution of the Party of th
			1	-			100000					
		100		Carl Carlo	1	N. Carlot	Carried States		STATE OF THE PARTY	No. of Persons	100	
		1		1000	STATE OF THE PARTY	1	いいしているのか	The Little	THE PROPERTY.	CO. 100 CO. 10	1000	Company of the Compan
								100			100	The state of the s
		-	1	1						1		
					1				2000	1000	1000	
	74.8 CT 35.0	4	77.00	Jose Live	Section 2	1000	100 Per 100 Pe	Charles and the	THE PARTY		STATE OF THE PARTY	Charles San Charles
	The second	and the same	1	S. 20 Charles	1	1000	Section of	The Party	The Party of the P	10000	100	Contract of the Contract of th
	Children of the	1000			1000	TOTAL STATE	Charles Avenue		The state of the s	1	2000	The Part of Properties As a second
	The second second		1							1		
		1			C.K.	100000	Cappend of the last		AND PRINTED	S. S. Salley	STATE STATE	



JODE ABBROATED NOTES:

(a) Entar dimensions wither in absolute units.
JEE (um) or in screen units. If imported as screen units, confirm that the Length & Chemistra Scales are set as appropriate.

(b) See Annex D of ISO10312 for identification codes.

(c) Valid Mineral Types;

AC activolisa
AM amostis
AN antivocivilia
CH drysolita
CR crocdolisa
TR termolisa
LA Libby ampalobas
CLA citar amphibosa
CLA citar amphibosa
CLA citar amphibosa
Annosles Solid solution series: Amostis, cumeringionite-grunerite
Annosles Solid solution series: Amostis, cumeringionite-grunerite
Treem-Act Solid solution series: Treemolise-Actinosite

other mineral type (specify in "other mineral description" field) Mo

OM Description Standard Salections: Wolastante Winchile Richterite Exonite Sepicille

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one snalyze, or across muliple analyses dates.

ERROR CODES:

- Primary/Total entry is not sequential
 - Mineral class type is not valid
- Structure dimensions are missing or are not valid
- total # structures with complex do not match information provided in a # structures > Sum wifn complex do not maich informetion provided is
 - structure type with complex does not match information provided in sr
 - identified as non-countable structure (total = 0) without comment

X 900(01

RTP-EPA Project National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

	ERROR CHECK		RRADOR		ABBREVIATED NOTES:	(a) Enter dimensions either in absolute units	(um) or it screen units. If reported as screen units, confirm that the Length &	Dimansion Scales are set as appropriate.	of this San Annual D of SiCh10312 feet	identification codes.		Ξ	AC activities AN amostia	3		ĕ		LA Ubby umphibole		Amoste Solid solution series: Amoste, cumminglanite-grunadie		OM other mineral type (specify in "other mineral description" field)	OM Description Standard Selections:	Septicities	Wolfastanile	Winchiele	Evionile		(d) Populate this field only if sample was	many than one analyst, or across multiple	amalysis dates.		99000	A Primary/Total entry is not sequential				7	G identified as non-countable structure (total = 0) without comment					
EM	Field Sample Not QC	Z6d		Commans	Contraction I wanted	THE STATE OF THE PARTY OF THE P	CLEAVAGE FIBER	THE REAL PROPERTY.		CLEAVAGE FIBER	は他のはないでは、大きのでは、	からいからいのではなる	TO DESCRIPTION OF THE PERSON O	STATES THE STATES OF THE PARTY	200日本公共開発の開発	THE STATE OF STANKS	いたというないないというという		California escalational modern		からなる のはこれが	うないのできるからない	MATERIAL MATERIAL SAN		TOTAL STREET,	TOTAL STREET, ST.	NAME OF TAXABLE PARTY.	10 (01 12 12 12 12 12 12 12 12 12 12 12 12 12	A THE STATE OF THE PARTY OF THE		のなっていればなるなは	とのなるとはないないとのできる。	OF THE PROPERTY OF THE PARTY OF	ACTION SOUNDS TO SECURE	会長を生まれている	ACCOUNT WHITE WAS A STREET	Section of the Party of the Par			の北京の名下の北京は	STATE OF STREET		Commence of the Commence of th	PER THIS CHOICE
National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM	Sample Type Field San QC Sample Type Not QC	Sample Status Analyzed Analyzed Analyzes Date 7721/2007/	Other Mineral 1 x yea, blank a no	Description Sixeton Photo EDS	11 11		7			CONTRACTOR OF THE PARTY OF THE	STREET, STATE STATE	14	1	一番の名の一番の名の 1000000 10000000	THE REAL PROPERTY AND ADDRESS.		CONTROL TO SERVICE STREET	CALLEGATION AND AND AND AND AND AND AND AND AND AN	Service Division Control of the Control	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COL	Contains participated Contains	はないないけんの いんはないになるから	State of the state		STATE OF THE PERSON NAMED IN	STATE OF THE PERSON OF THE PER	Section of the last of the las	Walter after Kraftle City		THE PERSON NAMED IN	大きのない かんとう できる できる ない	STATES TO SERVE STATES STATES		現 正 野りの おいれ かいかん	はははないのではないであることで		TO SELECT THE PERSON OF THE PE	THE REAL PROPERTY OF THE PERSON NAMED IN	CONTRACTOR OF THE PERSON OF TH	Charles of the Party of the Party of		TOTAL SOCIETY SOCIETY STATES	Control of the Contro	A STATE OF THE PERSON AND PROPERTY.
DES) for Air &			on Mineral Type	(c)	/ WV /	ALL LEGISLICATION OF THE PERSON OF THE PERSO	AN A		AN /		,	1	AN	100	麗		NA N		The second second	B 2000000		H Spirits in	P. Strangerson Co.			The state of the s	To a second			THE PERSON NAMED IN	Section of the second	O TO SECURITY OF		District St.	The state of the s		The second secon		Control of the	Secure Section		THE STATE OF THE S	The second second	era apparate
leet (NAL	Media Ar le Prep Direct	B. U.	identification	Code (b)	/ XOV	THE PROPERTY.	ADX	囯	/ KUV		ADX		ADX			1	ADX	Vine Epins	111111111111111111111111111111111111111	200	100		ALC: UNITED BY			1000	PORTING S	200000			CHILDRA	The second	1000		A STATE OF	1			V	Spirit S	Sec. 1201			
preads	Modia Sample Prep	OA by:	Interestrations (a)	Width	0.75	A ANNESSEE	60		726	46	0.75			1536			0.6 /	A SPECIAL SECTION	Name and Address of the Owner, where		STATE OF		Salary Co	1		0.00	Total I	200	10000		the State Co.	TO THE SECOND		BC3/ 50	DESIRE BY	5	-			- de-/				See all the
Entry S	<i>8</i>		Ofman	Length	11.3 7		122		A 52 A	52.5	36.6		32/	TOTAL DE	· · · · · · · · · · · · · · · · · · ·	15	3.1		NA SPECIAL	1000	SHE STA		0			100				100	2110 8			100	Cardina and					-	0	1	100	
tos Data	のは一個		Sirichins	rimary Total		Salas Oraș	2	Name of the least	Name of	3 /	4	9	0	0 635 9440	ARRESTANT OF	A ASSESSED	TOTAL PROPERTY.	S SECTION S	-	Salah Car	A SHOW		0.00 SEL			7.000	STORES !				A 0.00 P.	A SECOND		1000					100		SE 20 E			SECTION IN
/ Asbes				Primary	1	NACOUSTINE AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN T	2/	DATESTAND			STORY.	100000		Spinster,	SAMPLE	4	0.000000	STATES OF THE PARTY OF THE PART	-		A CT 1155	3	O DE ANGE			1	100	100			20170	1000		4	0.0000	10800							Total I	10 listed
Nationa	0.253-0016	Data Entry by: A. STEINER	Structure	Type	ND	9	NO H	QN	ON	MF	WB	WB.	ME	9	Q	MD10	MF	9	3	CTIL	TABLE .		N. Carlot	1		100000000000000000000000000000000000000	2000	STATE OF		100	STATE OF THE	10 miles	DEN SE	No.	10000	The state of			2000	AJONA PA	1		1551 50	TO WIF
	WPLE ID:	Entry by:	Deta Emiy Date; p	Opening	200	90	D10 /	- 11	200	200	- 81	91	n d	83	92	. 87	87	88	80	No.	P. Saffer	1				000	10000	1		1000	1000	N-16250	1	-4257	Carling.					0-40mm			1	HART I
	CLIENT SAMPLE ID:	Date	1000	Ged		-	-			2	2		No	2	S	5	3	73	3-	-0	3	30) !	5				1		10 M			THE PARTY OF	1	0 50					1000	200 M2			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

X 0000 01

RTP-EPA Project National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

BAALUEI BVALUEI	CODE	ABBREVATER-NOTES.	(a) Enter dimensions either in absolute units		IVALUE! somen units, confirm that the Length & evaluate Dimension Scales are set as appropriate.		(b) See Annex D of ISO10312 for Identification codes.		20	AC actrolite WALUE! AM arreste	N.		TR tremolie		ð	FYALUES NAM non-aspessos materials E Amostilia Solid solution sadas. Amostila cumminotonilla-counsette	UE Trem-Act	OM other mineral type (specify in "other mineral description" field)	CAN Legaciption Standard Streethoria:	D Wolfsstanle		TVALUES AUChdenie	and the same of th		analyzed using more than one instrument, by more than one analyst, or across multiple	analysis dates.		890000	D A Primary/Total entry is not sequential	m	FVALUEI C Structure dimensions are missing or are not valid	П	ii. (G identified as non-countable structure (lotal = 0) without comment.				
Field Sample Not DC Aralyzed 7723/2007	Comments	cleavage bundle	ACTUAL STATES OF THE PARTY OF T	chavage	net point a little and a little	1982513Acs		SPECIAL CONTRIBUTE	SUPPLY STANSON		STATISTICAL SPECIAL SP	SANCTON DESIGNATION OF THE PERSON OF THE PER	TO PROPERTY OF THE PARTY OF THE	White Attornament	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COL	ALC: SAME PROPERTY.	ののないのでは、	Manual State of the Party of th		のとなっているというのはない	ARCHITEGISTONS	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAM	一年 一日 一日 一日 日 日 日 日 日 日 日 日 日 日 日 日 日 日	cleavage fiber		THE RESERVE THE PERSON NAMED IN	THE SECTION OF SECURITY AND SECTION OF SECURITY OF SEC		THROUGHSTHERMAN	STATE STATE OF STATE	THE RESIDENCE OF THE PARTY OF T				The state of the s	The state of the s	WASHINGS THE	では、一切などは様で
Sample Type Field Sample QC Sample Type Not QC Sample Status Analyzed Analysis Date 7723/2007	finanti 1 = yes, biank = no plan Sketch Photo EDS	1,7	1	The second property of	//	The state of the s	CASA BANK MEN DAM	CARCILLOS AND STATE	STATE OF THE PERSON NAMED IN COLUMN	A TOTAL STREET	TOTAL PROPERTY.	DESCRIPTION OF THE PARTY OF THE	1/1	THE THE PERSON LINES	1,	Carry Control of the Control		,,	17	STATE OF THE PARTY AND ADDRESS.	THE RESERVE TO SELECT	,	111	1/63		CACHE SALES MANUE SALES	NAME OF THE POST OF PERSONS	THE RESIDENCE OF STREET		-	PYRAXENE	THE CONTRACTOR SPECIAL		Section of the last of the las	Total account and account	THE STATE OF THE PARTY.		
	ψ.	NV S		100	ADX AN AN AN	10	AN 7	/	1	X X XX	1	日本	X/ W/	1	,	ADX / AN /		ADX / AN /	100	1	ADX / AN	X AN	1		X AN X	图 图	X AN	Section of the sectio	ADX / AN	/ WW /	1 33	1		To the second	THE STATE OF THE PERSON ASSESSMENT	Contraction of the second	CHARLES OF STREET	Contraction and the second
Media Ar Sample Prep Direct QA by: B. U QA Date: 6/19/2007	Dimensions (e) Identification Length, Web, Code (b)	25 2 ADX		/ 8	3.25 / 0.25 / AD)	0.3	20	12	101	3.754 0.55 ADX	/ 60	STATE OF THE PARTY	/ 90 /	727	15/	35 / 3 / ADX	0.5 /	35 /	2 /	9	0.65	00	1 0.75		5 / 026 / ADX	O STATE OF THE	25 / 2 / ADX		31 / 5 / AD	1 :1	ADS ADX	0.6	525 4 0.5 4 ADX		TOTAL PARK TOTAL	COLUMN TOWN		SAME SAME
	No. of Shuctures	1,5	2	5		3/ 3/	STATE OF STREET AND ADDRESS OF THE PERSON ADDRES	4/	-	0		N STANKER OF	>		/ 80		1	00	700	1	110	8	N 9 0	2401600	1 × 1	围	11 12 12 16		12 45 0			0	NH C	A STATE OF THE PARTY OF THE PAR	A Mary of the second	STATE STATES		
CLIENT SAMPLE ID: [0-255-0017- LAB SAMPLE ID: [558085- Data Entry by: [A. STEINER Data Entry Date: [8/15/2007	Grid Structure Opering Type	81 8			NF MF	9	B5 ND 87 CD63	No.		87 CF	3	ON 08				Ct MiD10		C1 CD22	250	-	4	-	8	F /	MOTT	C3 ND	Ŋ.	G10 ND	1	G8 MF	NO.	MF	-			10 mg 20 mg 40	The second second	10 to
CLIENT SAMPI, LAB SAMPI, Data Entr	Grid Ope	1	The Part	100	-	No. of the last of	Contract of the last	-					18	100		-		31			2	-	1		-	10	1	+				-				1000		

X000'01

RTP-EPA Project National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

QA Detro: 8/17/2007 Data Entry by: A. STEINER. Data Entry Date: 8/15/2007 CLIENT SAMPLE ID: 0-253-0018 LAB SAMPLE ID: 555096

Media Ar. Sample Prep Direct

Sample Type Field Sample QC Sample Type Not QC Sample Status Analyzed Analysis Date 7724/2007



ERROR	CODE	ABBREVIATED NOTES.	Call Column Strangers without to wheat the column	(v) crime derivational major in account of the production of the productin of the production of the production of the production of the pr	\$VALUE: screen units, confirm that the Langth &	Dimension Scales are set as appropriate.		(b) See Annex D of ISO10312 for	identification codes.		2	Q:	W H	VE ON STROPPING	5		LA Libby amphibole	ð		Amostle Solid solution series: Amostle, cummingtantle-grunerite	Trem-Act	#VALUE: GM other mineral type (specify in "other mineral description" field) #VALUE: OM Osserioline Standard Salardons		Wollinganite	Winchille	Richferille	Erichille		(d) Populate this held drift sample was analyzed using more than one instrument, by	more than one analyst, or across muliple	analysis datas.			ENTOR COMES.	D. Mineral class bree in or united		D total & structures with complex do not match information provided in a		F structure type with complex does not match information provided in st						
	Continues	PERSONAL PROPERTY.	THE PERSON NAMED IN COLUMN	の は の の の の の の の の の の の の の の の の の の	Bally Control of the State of t	「他には 日 は ない は	Contraction of the Contraction o	THE PROPERTY OF THE PARTY OF TH	deavage bundle	cleavage bundla	いたはのできたのであるというでは、	Name and	Cleavage Look	Contract that the contract of the	Coppliant Colors of the Colors	いとはないないないできません	いたの中の数数数数数数表	cleavage fiber	cleavage fibers	THE REPORT OF THE PARTY OF THE	THE PERSON NAMED IN COLUMN	THE RESIDENCE AND ADDRESS OF THE PARTY OF TH	Children College	CANADA SPECIA	の 日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日	The second second second second	Control of the second	The state of the s	STATE OF THE PARTY	Property Control of the	一年 とはできるとのできる	odi suspectizioni di uni	The state of the s		A STATE OF THE PERSON NAMED IN	CONTRACT OF PURPOSE	White services and the services are the services and the services and the services and the services are the services and the services and the services are the services are the services and the services are the	MAN TO SELECT SECTION	1820, 187 mg to ordinary	RECOVERY OF STATE	となっているのでは	120-50 pt 1 10 05 10 10 10 10 10 10 10 10 10 10 10 10 10			Manager State of the State of t
1 = yes, blank = no	Shelich Photo EDS	NO SOM MAND	\$	1/2 Company	1/1	THE PERSON NAMED IN	ではの いったいか	A COUNTY STATE OF THE PARTY OF	A CONTRACTOR DESCRIPTION OF THE PERSON OF TH		3 Control 1988			//	A A A CORPORATION AND A SECURITY	一 とのでは、 一 の の の の の の の の の の の の の の の の の の	MALE STREET, MESTON			1		*	A A STATE STATE OF	11 A STORY PORTS	Shiel state intern	THE PERSON NAMED IN		The second second	STATE OF STA	13 Part 16	SHEET SATURE THE PARTY.	を と と と と と と と と と と と と と と と と と と と			TOTAL CATANACTOR	Married State of Street	THE THREE THE SPECIAL PRINCIPLE	ACCESSION STANDS	COLOR COLOR SPECIAL	The second second	CALCE STATES CHARGOS	THE PASSAGE LANDS	The state of the s		STATE OF THE PARTY.
Mineral Type Other Mineral	() Description St	SAND SEPTEMBER OF		ST STEELS STATE OF	AN A	は のでは 日本の は	NO. CHARLESTON	, N	N. C.	AN C	AN	THE RESIDENCE OF THE PARTY OF T		/ NV	1.40	N. V.	NN A	AN /	N.	/ W	W.	AN A	NN /	AN J	STATE STATESTERS N	STATES TO THE PERSON NAMED IN	SINGLE STREET, COLUMN C		S TOWN THE SAME	A CONTRACTOR	SECURIT SECURITIES OF	A THE STREET			San Control Stere	Contract Contract	Charles Special Street	CONSTRUCTION OF THE PERSON OF		THE PERSON	中心は大松を おおい	274000	The state of the s		a transport of the
identification Mineral	Code (b) (c	Sept.	ADX A	ADX /	ADX /	Manual Shakes	ADX /	/ YOY		ADX /	VDX /	1	ADA A	Anx	, VOX	ADX /	ADX '	/ XOV	VOX /	ADX (ADX	AOX /		ADX ,	SENTENCES DES	THE PROPERTY OF THE PARTY OF TH	5 Notes south sales		BAR THE STATE OF		WHISTON WAY				CALL STREET, S	The second second	Mary Comments	of Special and Street	COMPLYS OF	THE PERSON NAMED IN	かんだけんかいた	To the second se			
H	Length Width	圖	24.5 4	100	1.15 0.15 /	1991	3		19.5 / 6	11.57	82 0.65	20		38/ 02/			7.9	12.5/	13.57	13,5 0,75 /	10.5	141 035	37.5 /	-	國際	現代は (は)のは ()の	TOTAL STREET,		THE PROPERTY OF THE	10 May 10	AND PRINCE				- CONT. CO.	14 15 15 15 15	THE REAL PROPERTY.	AND REAL PROPERTY.	THE PERSON NAMED IN	MIN SOME	が上ので記録が	STATE OF STA			
No. of Shuctures	Primary Total	SCHOOL SEPTIME		0	0		2 / 2 /	8	0	4/ 4/	5, 2	STATE OF THE PARTY	TOTAL STREET	William Bringhow S	/9	9	100	8 8	0 / 6	6	0		101	13.4	形性理 在前班的	できた。 	Carlo de la carlo de		TOTAL TOTAL	The second second	から ないのい かんかん	STATE OF THE PARTY			STATE OF THE PARTY	2000	STREET, STREET	1000	THE PERSON NAMED IN		から ましたないの		R	The second secon	
Grid Structure	Opening Type	H1 ND	H3 MD31 /	H3 MF	200		¥6	die of	200		H9 B	ξ .	+	ME ME	-			H3 F	1	8	+	2 2	-	2	CH Sc		STATE STATE			The same of the sa	Carried Street	The state of the s				THE PERSON NAMED IN					THE PERSON	C C C C C C C C C C C C C C C C C C C			ACA PERSON
H	o pus			000	1	200	- Hetr		1000	The second second	1	1		10.00	s	3	9	3	2	0	17	32	9. 3	2	2	2			1000	1	10000				200	1000			N H MAIN	100					500

National Asbestos Data Entry Spreadshoet (NADES) for Air & Dust Analysis by Superfund TEM

200	The fact in Fred Person	STEINER									The same of				
Cleta	Data Entry Date: Griti2007	V18/2007	1		0.0	OA Date: B	B. U 9/16/2007	The state of		177	Analysis	Data 1724	Analysis Data (1342001) 3 1410 >)	\
SHB	Opening	Shuther	No. of Structures Debrase Total	Total	Dimensions (s)		Identification Code (b)	Minaral Type C	Description	Statch Photo 605	Manh	000	Comments	ENROR	
-	B1	4	1	1	12.57	100	ADX OA	AN O.		1.		ı	cleavage fiber	ABBREVIATED NOTES	台
-	16	80	1/2	-	23.5	4.5 7	ADX	W	1000	11	1		cinavage bundle		
-	in in	000	1	3.	757	25/	ADX	W		*			Chavage bundle	(a) Exter dimensions withor in absolu-	Other in shad
-	0 0	Men	13	+	11.0	200	ACIA	AN	Carried Co.	2000	,		Agings we work the season	acree units, confirm th	hal the Long
-	ā	MF	1	1/8		150	ADX	AN	100	1000	100	3	HOLDER PROPERTY.	Denantian Scales are set as approp	udde se per
1	. in	WF	Contract of	/ 9	164	1/51	ADX	AN	THE SECTION	11		ı	している まいかいのうだい		
+	B.5	MF	1	11	25 /	O.B.	ADX	W					The state of the s	(b) See Annex D of ISO10312 for	O10312 for
-	81	WOTI	0	10	13 /	-	AOX	AN				ı		CHARLES COOK	
1	100	No.	1.	0	40.6	120	ANN	AN A	The state of		-	ı	STATE OF THE PARTY	des Valid Mineral Tycses	
1	100	MUSI		10	49.67	1	AUX	AN	The Market	-	-		STATE OF STATE OF	AC activities	
-	ā	MF	1000	101	100	180	ADX	AN 4	- Lancada	100	1000		SCHOOL STATE OF THE PARTY OF TH	AM amostle	
-	18	MR10	1	111		0.25 /	ADX	AN V	Checup	320.0	Ì			AN arthophyllib	
-	83	/ 4	8	12/11	8	03.7	ADX	AC Y	S. Artifolish	11	1 1	78.9	upraph #01010, EDS the	CH dhyselfs	
)	. B3	MD42	/ 6		1	82 /	ADX	AN O	1	N 60000	100		STATE OF COLUMNS	3	
-	8	MF		13	7.75	1	ADX	AN					cinevece ficer	TR. Intendilla	
-	20	MF		7	-	1	YOY			1	1	ı	cleavage liber	CA LIBOR ample	Monte
s	200	200		10	300	0.00	AUA	V		1	1	ı	The second second	CAN COMM MINDE	NOOR .
3	000	MON	100		1 5	40.	AUX	AN	Street, or	3			SCHOOL STATE OF STREET	Amenia field subtine sarian Am	ton tanders A
9	83	MF		111	3.5 /	02/	ADX	AN	No.	-	1		THE PARTY OF THE P	Them-Act Solid saluft	for sarles: T
	83	MD11	/ 11		17.25	11.5/	YUY	AN		1300	1		Chief Control of the	OM atherminer	other mineral type (upo
3	83	MF	1	1.81	17.25	1.4	YOY	AN		0.00		150	cleavage fiber	NO WO	OM Description Star
	- H3	MD42	12 0	>	90		ADX	AN A	The second			ı	The second second	8	siloida
);	86	NB		800	11	ě lik	AUX /	W	10000000			i	TO CONTRACTOR OF THE PARTY OF T	2 3	Distante
3	18	- AF	1000	21	25/	0.4	YDX	W	130-163	200	CHESTS		Company of the last		Richards
3	- 83	MR11	C. AST	127	12.		ADX	AN	Shine of the	1		No.	STREET, SALVANDE COLOR	4	foote
4	83	MD11	13.7	1	15-1	-	ADX	AN	ALC: NO	A September	122		SERVING CONTRACTOR		
-	69	MF		23 /	11	-1	ADX	AN			1		MINE CARRIED	(ti) Populate this field only if sample	tonly if same
1	38	MOIT	14/		18	SD	ADX	W.			-			and goin backana	that one has
-	100	MILITAR	100	- 44	1	SI 9	ALLA	W				Ì	The state of the s	Amstylk chairs.	milet of sec
-	81	- MF		28 /	287	100	ADX	AN	The Party	ALC: N			- INSCHARGE STREET	T-I	
1000	83	- ME	12,245	20 /	0		ADX	AN	Section 2				11-124F2-1-144E48E		
	63	100	100	27 4		0	YDX	AN	Country 3	1	The same		Sar Obeneda	9	
	83	MD02	16 /		43.57	12.5	YDX	8						A Primary/To	Primacy/Total antry is no
	120	307	1	200	1		ADX	NV.	ACTION OF				chause flor		Monthly Calls type in 100
-	83	- AM	Contract of	307	3.5 /		Е	AN		-	1		TOTAL CONTRACTOR		local & structures with co
	992	0	12.1			0.4	2	AN	1	100	100	i	THE PERSON NAMED IN		# structures > Sum miles
1	88	C032	10 7		40.57	-4		W			50	Table 1	September 1910		stracture type witn camp
	8	8		32 /	-1	- 61	М	VV						G identified as non	as non-cour
	60 20	- Stude	100	200		110	AUA	W							
	200	105	1	175	28.4		AUX	AN		1000	San Park	To the same	Walter action		
-	RS	- 100		18		0.15/	ADX	AN	Cardo	7 100	Total Co.	100	Sept Office of the last		
1	86	- ME	Catalog C	38	1 60		ADX	AN	- Indon		1000		The City of the		
1	A	MD22	20 /	0	S.	101	ADX	. AN	1	1000	The St.	2000	かんだけんないとは		
-	85	ME	3.53 HBPCS	37 /	8	1.25 /	YOY	AN	1	E.	THE REAL PROPERTY.	DESCRIPTION OF REAL PROPERTY.	からんだものがん		
	85	ME		30 /	10	SI	ADX	AN					derings for	01	
	2 2	MOSZ	21.0	1		1	YOX	W				I		-1	
	88 88	NA PAR	Section 1	40.5	410	1111	1	AN	September 1	1000	Sec. al		San Landa	T	
+	88	100	200	41.5			I	AN				l	VSQ1 1000 - 1-1		
111	88	- 10	10 To	42.7	2.5 /	-	1	AN	1	A. Carlo	1000	Saras.	Sec. 10.11, 0000	T-	
	88	MB		43 /			YOY	AN	40000	1	2000	No.	かんしまして かいるのだ		
1	9 2	MO10	27/		115/	111	4	AN	1	2000			A CHARLES OF THE PARTY OF THE P	20	
	8 8	- Therese	1	*	4.57		-1	AN							
	98	MCTO	127	100	1		ADA	N. T.		0				-	
	000	1	75	64	1	-	200	24						T	

bactele units charl as angth & propries.

Amasin, oummiqtesile-grunnis Transilse-Acinalis acity in "other mineral description" (sol) fandard Jeskotker.

- y la red anequential in the world are not valid less are minimal or an experience of the construction of t

											90.0			20	i		ř														-	_	_	_	_			_		_	_							_	_	_	-					10															r
The state of the s	Charles Continued and the Continued of	これの人でいたことが	Carlotte 100 Contract		The state of the s	とうできない かんちゃかから	Manager of Assessment	Contract Contract	The state of the s	The Control of the Co	こうして こうしき というしょう	Mary and the second	Control of the last of the las	cleavage (Ber	China College College	いいれまりませるとも	Charles of the second second	- Carrier 19749	ST THE ST THE ST	STATISTICS OF STATISTICS	WITH THE STATE OF	The state of the state of	120 - 120 - 120 A	CONTROL CONTROL	The state of the state of	A THIRD PROPERTY AND ADDRESS OF THE PARTY AND	The Assessment of the Party of	からなる 中の かんかん						The second second		cleautos flar	The state of the s	The same of the sa	Statistics of the same of the	ACTOR OF PARTY OF	Section Value of the San	にいりに にて 日本	からない からない からから		WANTED STATE OF	The second second	CONTRACTOR AND	The same of the sa				The second second	Part of the Part o	17.6160 months	でとうしているというです	Company Company	CONTRACTOR AND	The second second	The Person State of the Party o	Control of the second	CONTRACTOR SECTION		CHOST SOUTHWAY SOUTH	ACTION OF THE PARTY.	Control of the second	cleavage bundle	CALCOURAGE STATE	AND CONTRACTOR	Contraction of the last of the	からのない のできるない	The second second
	Section Section	Section 2				State of the last	The Street	THE RESERVE	200 H 1000	Control of the last	State of the last	の対象を	100 (100)	Check Blacks	100	1	10-1	100 A	THE PERSON	Section 1	Section 1999	Section 1	Eller Property	10000	Charles Control	1000 0000	The Party	B (7)										10 mm	The last of the last		The second		9000	Contraction of	E 100 E 100 E	10000	10 TO						- CO 1 CO 10	CASH HATE	STREET SHAPES	Charle Copy	Street Control	STORY TOWN	of the latest	San Care	STATE STATE	0.000 median	A 17 TH 40	を という	神経の につ	Choice of the	The Cartie	- CHAP CHAP	10 CO 10 CO	Metric by the	
	The Court of	Carlo Constitution	The state of the s			Section and the	2 Algebra 10,240	STATE SENSO	TANK THE PERSON		1200 W 1000 W	The second	Heron Property	THE WATER	Dept. Office of	Contract Contract			Apr. 11 11 11 11 11 11 11 11 11 11 11 11 11	The second	Control of the Control	STATE OF THE PARTY OF	The second second	1000	100000000000000000000000000000000000000	Color of Self of	0000	Carpy Strategy	2000							100	100		ACCUPATION OF	CONTRACTOR CONTRACTOR	1000	1	Contract of the last	10000	State State	一年 中の	STATE OF STATE	No. of Concession, Name of Street, or other Persons, Name of Street, or ot				The state of the s	Contract Contract	CONTRACTOR OF STREET	SOLD STREET	STATE OF SECTION	1 Contract Contract		September 1	ACCRETE SECTION	THE SAME SPINES	1000	THE STATE OF THE PARTY.	A CONT. 1 SPEC		THE PERSON NAMED IN	15 m	Charles Committee	The same of	Contract of the Contract of th	
No. of the last	AN	AN I	AN	WW	200	AM	NA.	AN	AN	AN	AN	AN	W	AN	AN	AN	AN	AN	- AN	- AM	AN	- AM	- AM	AN	AN	AN	AN	- AN	27		VV		NA.		NA.	AN	AN	NA	AM	AM	AN	AN	AN	NN NN	W	- AN	AN	AN	WW	W	W	44	AN	AN	AN	AN	AN	W P	AM	AN I	AN	AN	- AN	AN	AN	AN	AM	W	NA L	NN I	
AND AND	ADX	YOY	YOX	YOX	2000	ADX	ADX	YDY.	ADX	ADX	ADX	ADX	ADX	ADX	ADX	ADX	AUX	AUX	ADX	YUY	ADX	ADX	ADX	ADX	ADX	ADX	ADX	ADX	Ann	ONL	WW	VIII.	AGA	ALC:	AUA	Any	AUX	AUX	ACX	AUX	ADX	ADX	ADX	ADX	ADX	YOY	ADX	ADX	YOX	ADX	ADA	AUX	ADX	ADX	ADX	ADX	AUX	ADK	ADX	ADX	ADX	ADX	ADX	ADX	ADX	YOY	ADX	YOX	ACX	ADX	
2 2 2 2	0.17	62/	1 1	0.00	1	1.0	10	12/	1 60	0.84	0.25	0.2.7	257	25.4	0.25/	186	238/	0.25/	0.25 7	9.0	0.257	0.25	3.28 /	11	751.0	31	0.28	1	140		0.3	1000	100		100	101	1880	0.16/	48.5	187	190	0.25	0.1	13.5/	15	5	160	11	-18		100	42	1	10	10	100	1026	1.8 /	181	+	3.5	4	5	0.0		1.1 6	-	Ū.	32 /	à,	
100	2.8 /	40.5	× 90 ×	0	1 2 2	111	14.75.4	8.5 /	1.0	7.25 4	1.	1000	125/	115/	187	136	0.3 /	1	3.6.7	2,75 #	2.5 /	10.7 /	15.1	14.07	111	1 90	101	* 8 0	100		0	4.5		90	17.72	467	10/	157	188	4.4	17	0.8.7	0.8.7	28.5 /	555	4 7	357	128	0.0	446	1/9/	100	13 /	357	11	5.25	177	22.8	10.75 /	H	1111	15	1	6	1	5.05	11-1	111	3.75	27.50	
000	1 87		/ 04	100	100	1 83		1 45	55 /	/ 95	27 /	20 /	100	/ 83	A 08		1.10	1 00	1 88	1 79	98	/ 90		67	1 88		1 49	100	1	-	(4)	100		4	100	77.	18/	100		100	110	4.09	12.7	200	94 /	98 -	98	87.6	100	100	100		92 /	83 /	1 76	1 50	1 98	0	67 /	100	1 86	09 /	100	101 6	1001	100 /		104 /	106 7		
	-	25 /	100		t	1	20 /		0	10000	4-12 S	STATE AND IN	1/12	10000		1.86					1		28 /		100000	30 /						1	1	1	*	1			1 88			200		34/	1000					35	30 /	1 00	-	1000	1	C 18-	20.00	40.0		419	- June		475-57	421	10	441	484	100	48	47.7	
ON I	MR10	CD52	CF	al o	300	5 6	MDS3	WB	MF	MF	MF	MF	MD21	200	300	MD41	100	191	ME	MF	MF	MR60	MD21	-594	MRHD	MOM	- ME	ME	200	No.	4	-	MICSO	Mark	100	and a	- SAG	AABAD.	MOAG	100	3	377	N.	MOST	MF	100	- 100	M	MF		140.40	MINES	MF	MF	- Mar	- ME	MCH	MO11	MF	MD32	MB	1/6	MR10	MC40	MC50	- 10	MD11	MB	MC20	MD32	
000	88	- 10	99	10	2		88	88	88	88	88	99	98	RA	BB	- Bak	940	BR	88	88	88	88	88	88	100	88	888	na.	0 0	000	8 2	1	60 2	000	0.00	010	0.0	Bro	910	Bato	a dia	810	910	910	910	010	840	810	010	810	010	2 0 0	810	810	810	810	B10	010	510	010	010	D10	010	50	50	90	50	50	90	90	
-	-			-	1				9		1	1				-				1	1					+		S	4.0	3	9	,	3	-	0	3		3	5				- 1 -	-	1000	- + -			-	-	1		-	To The	-		-	1		-	- 1	1			200	A. C.	-	-		1	

284

0.60

								T.		T	Т	1		16	110	10	Т	Т	1	1	-		>		1	T	1	1	T	-	u	ď.		T	T	T	1	1	T		П	ž	0		ğ.	7		V.			3	a	31	1		ž	i				N	V	¥	Į.	787	1			B	100			l.	1/2		T	1
HANDS (DEC	4720101A	-1425 A CO	000000000000000000000000000000000000000	100000000000000000000000000000000000000	Shirt And Annie	一大大 一日日日日十十五十二十五十二十二十二十二十二十二十二十二十二十二十二十二十二十二十	PETRONICAL PROPERTY.	Company of the Company	The state of the s	The Party of the P	200 000		100000000000000000000000000000000000000	Partition (1)		A STATE OF THE PARTY OF THE PAR	course Day	MAN HOLE		savage floor	The state of the s	CONTRACTOR OF	一年 一日	Partition of	The second second					100000	09105/0404-2	大学の の の の の の の の の の の の の の の の の の の	25-C135	1000000							STATE OF THE PARTY.	Ten Service	STATE OF THE PARTY	OTTAL PRODUCT	CONTRACTOR OF THE PARTY OF THE		OBGILLER	1000		The state of the s	10000000	Charles of the last	the party of the last of the l	The state of the		10.7-11.00	(117-523-50)			STATE OF THE PARTY	Pour Sicher Marie	The same of the		A CONTRACTOR	Charles March	からない あいまして	A	Magnetic Spirit	PAGE SAGDAN	200	Carlo Market	Section of the		Date Server	Part Market	The second	The second second
	1000	6	1	ĵ	è	No.	0	1		1			ì		Ì	1	Fileson	No.		cinny		100				1					į							1							Š	i		200	8			H	ì					S	2	i i	è			3	i i	1		ř	-	í.	b	-	Š	è			
		v									ı			ě										e		ı		i				8		ı			ļ	1	ı			9	ē	8	8	ē	a	6	e e	ő		ş		į.	1			2			9		1	ı	ı	8		Ť	B	B	Ģ		ı		8		1
	200	100				-	1				-	-	200	100	0.00	1		+	+		1	155	1	242	-						200		1	H	ł	-	+		-			Į.	10	2	17		1987 3-19	Park dotte	100	J.		8		1		8	1	100	L.	100	0.0	200	100	10.0	9.	67.0	100		Service Con-	0.0	170.00	1000	1	5	1		1
-	-	1		1	1	5			-	-	1	-		0		1		+			100	100	di.		-		1	1			0				-	1		1	1			1	10					10		Š						1		6		200	100	1			4	100	Sept 18	10	10	316	100	200	100	1	100	-	
		1	1			-	10	1	100		-	1	8	9	600	10	-	+				100	N.			+	+		1		8	To the second			1		+		+				1		1.	1	D	1				1		1		1	N		1	9	i	1,000	The state of	2	i i	Section 1	100			1000	1000	0.00		10.00	100		
		100	1				1	-	1					100	2000	6					0.00	STORY OF	1													1						2	200	d	1	1		1	e e			2	1						2	10000	100	2001		100		100	1	24116		1000				271111	-		
NA I	AN	AN	AN	AM	AN.	AN	AAN	1		8	5	W	W	W	AN	AN	100		W	N	AN	- AN	AN	AM	AN	1		NA.	AN	AN	AN	AM	AN	1	5	N.	V	AN	AN	W	AN	AM	AM	W	- VV	W	AN	AN	AN	AN	AN	AN	W	W	AM	W	VV	AN	AN	AN	AN	AN	AN	AN	AM	AM	· AN	AM	- AN	AN P	AN	AN	AN	AN	WW	1	Alte
-			1			-	-	-	-	+	1	-					-	+	-	1				1			+	+			i)	9											CONTRACT			- 100	-			,	×	J		×	×	,		×	×	×	×	×	X	×	×	×	X	×	×	×	×	×	×	×	W X	-	-
YOX	MOX	ADX	ADX	ADX	AUN	APOX	AUX	AUX	AVV		1	ч	u	93	ш	ш	E	ч	ACA	ADX	ADX		ADX	Ŵ,	Н.	П	1	4	d	13		20	Ю	п	-	AMA	ADX	ADX	VOX		ADX						Ù	Ü		ADX		E	61	П	ACX	ы	а				ř	n		8	£			Ì		2	Ě	ã	Ŷ,		ADX	E	
7 900	2 0	1.15 /	0.1	1000	2 30 0	200		1 90	1000		6.4	000	25.5 /	75.1	10.25 //	0.64			0.26	30 /	1110	0.5	18.5 /	1 50	1000	1		0.00	0.25	3.5 /	5.25	12/	111	100	1	7 00	0	0.4.5	0.15	15.5	18	24'	111	0.40	0.1	0.25	1,757	30.5 4	31	3.25	35%	0.25	0.25	0.45/	0.25 /	11.5	536	1	1.1	0.4	0.25	30 /	9	2.35	1.6	1.8 /			0.20 /	0.45		0.75	5 /	1.4.1	3.5	1	-
16	10	1001	ш	10	10	D/		3 6	н	ш	-	-	- 1		14.95		ъ.		17.	40 6	2.5.7		70.5/				- 1		- 6	- 1	<	÷	t		100	1	9.5	9	2	70 /	52.5 4	76.02	5.8 7	1.05 /	25/	1.5 (5.25	22 ,	2 19	10	20 4	135 /	110	18.4	2.75	25.6 /	22.6 4	9.25 1	3.8	3.25 /	125	00 /	1/ 05	15 //	15 /	10 /	7.25 /	9		2.75 /	03/		1.07	7.0.7	17.6	1	41.11
-	p	109 /	U	1	H	1	E	1	E	Е	\$			1177 3						121 4		122 /			1		11	и.	120 1	-1	Ħ		li.	H	1	1	132 /	:1	134 /	- 1	136/	-	111	-			-		142/	70		1	-	3	148	+	148 /		3	152 /	-	15/	154 /	100	150 %	157 6	27	53.			162 /	2	-	104	130	100	
108		106	110				1	1	1	1	1	110	2	13	-				1	-		ď.	1	12		1	1		1			1	-	1		2	2		Ц	1	4	1	12	1	7			1	4	1	-		ij	1		-	Ì		-		1	,			100		100		11	2				L		1	
1	48				97	-	6.43	1		1	1	100	54	40.00	188	N. Carlo				98	57	A. C. C. C.	. 58			100	200		/ 00	61/	62.4	63 /	ALC .	1	1			9	8	- 67							03 %	69						701	71	77		1			200	7.3	0	0					1	74	75	200	111		78	0	>
30	COM	CB	50	3	MD44	200	OF-JAY	Mosky	- Think	NAME OF TAXABLE PARTY.	-	-	MOTI	MB	MOSS	MF	100	-	- No	MC21	MO10	MF	MD20	- 170	100	140000	MENO	3	a.	MC20	4	14	CDPA2	700	3	8	CH+0			MDB3	- ME	Me	MF	MB	MF	MF	4	MD63	- AM	M	-00	MF	MF	100	8	MD52	M	100	ME	MF	- 100	MD76	MF	MF	MF	MF	MF	MF	W	100	4	4	MD11	- MF	ND21	NO.	Total I
200	2	8	90	200	2		5	1			50	10	10	10	10	144	1	5	5	5	00	COS	80	500	200	3 8	В	8	8	8	80	500	8	200	3	3	3	1	d	8	8	603	00	60	03	03	8	CCS	8	8	60	8	60	D3	60	8	8	20	60	8	8	D7.	07	- D1	40	20	00	10	20	02	70	20	70	20	10	40	1995
										-	-							1	-		2	2	2	- 2			-	74	2	2	2	S		3	5	>	3		•)	3	4.3	3	6	2	2	2	24	2		2	2	2	1	2	2	2	2	2	~	2	2	2	2	2	2	2	2	2	2	2	. 2	2	2	2	-	1

X000'01

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM



s sither in absolute units its. If reported as n that the Length & re set as appropriate.

1010312 for

olokien sarkaz Amasita, cartenbigionilis-gransilis olokien sertex Trenellis-Aditvalis-silventi type (opedity in "other miseral description" field) "C barrophien Standard Selections: Sepaleire Welstetlantie

id only If sample was to then are instrument, maryst, or excuss multiple

- Total setty is not sequential class type is not valid to dismensions are missing or are not valid inclusors with complex do not exist, internation previded in situation type column may be see with complex do not maich information previded in situation type column may be with complex closs not maich information previded in situation type column of as non-columnials situation (dotted = 0) without comment

D D		0		0	BVALUE				o																						3	n															0	
	ciervage liber	Charles of the second	Mark Control of the	Stancara Control of		STREET, SOUTH STREET,		elektrone Bee	The Address of the State of the	Mile of the control o	Performance and a second		cleavage	College College	cleavinge		Secretary of the second	STREET, STREET, STREET,	The state of the s	Shark-Seventing.		The state of the s	STATE STATE STATE	THE STATE OF THE	clearage bundle	Then product the country	The second secon	No.	STATE STREET, STATE OF STATE OF STATE OF STREET, STATE OF STA	A Charles and the face	MATTER STREET, SALE		Separation of the Separation o	Affect of the Control	中でも かんかん かん	The state of the s	ALCOHOL: NO SERVICE DE LA COLONIA DE LA COLO	Physical School of	A STATE OF S		cleavage	STATE OF THE PARTY	CONTRACTOR OF STREET	1000 SERVEN WAS \$1000	Met nation could be		Analysic Jody Xu	cleavane
			the second								100	1000						TION -						900		1			40.50				J. Comp.		200			N				200		100				010
			STORY OF					100						1	6	2000	90 40 50	1000		A STATE	1000	The Street							10000			100	1		100		100	100	Trap to			100		Sept.	Section Section		No.	669
			1000			The state of				2000				10000			PTEN DE	10000		Parent Sec.	2			2000	1000		1000				Section 2	2000			200			P. (2)		-	P. Calleton	PRODUCT OF	200	10000	No.	-		
***	N W W	NA AN	AN AN	W	N.	W	AN	AN	AN	AN	W	W	AN	AN	AN	AN	AN	AN	W V	AN	AN	AN	AN	W	W	VV	W	AN	AN	N N	W	N N	W	W	W	W	W	AN	AN	NA.	AN	W	200	AN	WV	AN	200	AN
XXXX	ADX ADX	ADX	ADX	ADX	YOX	ADX	ADX	ADX	ADK	ADX	ADX	ADX	ADX	ADX	ADX	VDX	ADX	YOY	YOX	ADX	YOX	ADX	ADX	YOX	ADX	ADX	VOX	YOK	ADX	ADX	YOX	YOX	ADX	VOX	ADX	ADX	ADX	ADX	ACK	Any	ADX	ADX	ADX	ADX	AOX	ADX	ADX	YOX
	11 4 5	927	0.00	1 5	750	757	. 90	175/	22.67	221	122	115	127	1.90	3.1.6	42 /	0.0 /	044	2 50	0.7 %	0.7	4 7	19.54	18.0 /	210	127	1 78.7	1	12/	225/	1.4	45/	524	3.5	4.5.7	111	30 /	0.25 /	0.87	33/	1 8	0.5	137	12.5 7	0.85	3.6	287	18 (
112.121	2822	(2151)	100	122.7	3.5 6	30	188	/ 0	407	38 /	35 /	10 /	10 /	5.0 /	12.0 /	1 00	10 /	10	100	5.8 /	9.25 /	42.5/	30.17	30.0 /	50	101	10,	123/	25.7	12.25	6.25	109.254	702	20 / 100	7 92	125/	7.87	8.75	525	1 50	7 05	100	813		122	125	250	0.0
215	1 22 /	7 7	98	1	00	1	100	110		63 /		190	87.1	/ 80	69	The same	717	72 /	2	75.6	101	14		78 /	108	Department	110	100	. 40	. 65 /	90	110	TO STATE	98	169		1 10		85 /	1	7 76	198	100		Ц	1001	1	101
10	2 2	28	, W.	27 /		7 02	1	100	200		31	Carried Street		Contract of	32 /	700	Carrie	0.15		1	0	X	35 /	-		36 /	100	38/	38 /		,	415	10	100		44	40 %	400 /	1	775	The Park			48 /	Total Control	497	916	
MF MF	MD+2	200 K	P P	COZI	ő	MO33	NE	MF	MDS2	MF	MD44	400	200	W		CD+17	5	ò	3	5	b	MOIT	COSS	80	9 8	MD11	MB		F	CF	5	5051	MD11	MONT	MF	4	ME	MD11	MF	MOSO	ME	M	9 9	MD71	- 100	8	MO21	-Mi
222	0000	822	500	3 2	2	2	2 2	20.0	3	8	3	2	3 3	2	2	88	8	8	88	8	90 6	88	8	80	88	8	88	File	2	E	E I	2 2	100	E8 E8	2	2	2 8	2	110	2 8	10	12	2 2	10	40	2 2	2	12
222	nann		200		2	2	2 2	24		2	2	. 2	2	2	2	5	3	9	3	12	0	3	5	3	2	2	2	2	2	2		2 4	2	2	2			2	14.0	2	2	2		2	~	2	2	2

3 93

벍 α à w 55 102 45 6 7 ADX

55 120 23.5 1.25 ADX

55 120 23.75 1.25 ADX

55 120 12.75 1.25 ADX

56 100 12.75 1.25 ADX

57 100 12.75 1.25 ADX

58 100 12.75 1.25 ADX

58 110 12.75 1.25 ADX

59 111 12.5 6 8 ADX

50 111 12.5 6 8 ADX

50 112 12.5 ADX

50 114 12.5 6 8 ADX

50 12.5 ADX

50 ADX

5 the same Sell in

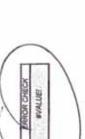
X000'51

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

| EPRIOR CHECK OK - No errore found | | | CODE | ABBRICVATED MOTEE: | (x) Ester dimensions ether in absolute units | (Anti) on its satisfiest untils. If imported as
women units, condition that the Lancit & | Chemotien Beales are set as appropriate. | | Do See Annex D of ISO10012 for blowfisharing codes. | 1 | (c) Valid Minarat Types: | AC activalis | AM smooth | Col. obviously | CR cruddolls | TR townsile | CA ather amobitors
 | NAM non-adaptan material | Amadle Boild scholion series: Amoulte, cummingscribe-grunnstile | Trem-Act Solid soldies series: Tremcille-Adinglile | One conservation type payercy in uniter minimum disapparent metal. OM Description Standard Selections: | Septides | Welfacteulle | Abritada | Extense
 | | CONTRACTOR VARIED DATE THAN ONE THAT STATE THE CONTRACTOR OF THE C | by mann than one analyst, or acress multiple | emptus centra. | | SPRICE CODES: | | C Shudden dimensions as multiples or are not valid | | |
 | | F SUNGERT TYPE WITH COMPUSER ORNS and malich information provided in structum type collection. C Identified as non-covariable steuctum thetal is to without nonessed. | | | | | | | | |
 | | | | | |
 |
|-----------------------------------|--|---|---|--------------------|--|---|--|---------|---|---------|--|--|-----------------|--|--|-------------
--	--	---	--	--	--	--
--	--	--	--	--------	--	
--	--------	-------	--	--	-----	-------------------------
--	--	---	--			
--						
Sample Type Floor Sample	Sample Status Analyzed Analyze Date (812/2007)	014 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Other Mineral 1 = yes, black = no Cemments Bostofplin Statch Photo ECS.			1 1 1 UGRAPHI 81027
A A	D. B.	8/19/2007	httensification Mineral Type 7 Code (II) (I)	2 ADX OK AN OK	YOY	ADX
Media Ar	GA PS	Rement	No. of Structures Comentrions (in Primery) Total Length, Width	1 20	747	4
 | 37.5 | 12 / 31 / 11 | 13 / 6 | 14/ 16/ 15 | 70 'O | 2 0 7 | 14 / 75 31 | 100 /
 | 10.57 | 19.51 | 40 4 | 19/ 18/ 5 | 20/ 27/ | 77.51 | 10 / 21/ 7757 1. | 21 21
 | 11 1/ | 23, 11 | 1 /20 /20 | 250 | 25/ 44 | 0.25/ | 4.5 6 | | 100 | 30 6 87 / | | 1 20,
 | 4 22 | HATTER BETTER HET THE | THE PERSON NAMED IN COLUMN | THE PERSON NAMED IN | AND THE PERSON NAMED IN
 | |
| CLIENT SAMPLE D. (0.253-0021) | Dala Entry by, A STENER | 115/2007 | Grid Geld Sinuture P | 1 A2 MO11 | 5 | | JA CV | | 1 AZ MO11 | + | - | 1 A6 MC11 | - | 1 | ON S | 800 | 010
 | E4 | | EA | 3 | > E4 | ** | 3 MC22 | A5
 | AS | A7 | H | 2 A7 WF | | 5 | 2 A5 MB | 2 A8 MF
 | | | 2 03 MF | H | + | + | H | 2 - 60 03 MB | 600 | De | De | +
 | 80 | | で 日本 | | THE RESERVE OF THE PARTY OF
 | F 10 10 10 10 10 10 10 10 10 10 10 10 10 |

RTP-EPA Project National Asbestos Data Entry Spreadshoot (NADES) for Air & Dust Analysis by Superfund TEM

LABS	AMPLEID	LAB SAMPLE ID: 556066	The Party of the P	Service a	Sam	Sample Prep Otest	Med In the State of	100000		OC Sample Type Not OC	Not OC		HMB
Dag	a Entry by	Data Entry by: A. STEINER	San Printer	2	3.0	OA by:	a U	Agament St.		Analysis Deb	615/2007	1	
			100	The same	Silvering S.	100				STATE OF STREET	CO. T. C. S.		
Cutte	Opening	Type	Primery Total	Total	Length Width	WAST	Code (b)	1	Description	Shakch Photo EDS	Continuents	CODE	
-	- 62	M022	11	1	31	31.6	ADX.	404		Contraction of the St.	ATTENDED STREET, STREET,	L	ADDREVAT
-	20	ME		-	12.75		YOU	AN				_	
-	803	N. S	16	1,	/ 08	111	ANX	AM		The same of the sa			(A) Entire con Jumb or in ac
-	82		3	1/1	50.75 A	23.7	ADX -	AN	STORES OF	Street Special and	Company of the Compan		DOLLARD UNI
-	82	MO21	1	10000	32 /	0 1	-		Part of the last	State County State of	THE PERSON NAMED IN	٥	Dimension
	82	MF	Control of	1 9	32 %	2.7	ADX	AN	2450 2440	Charles Annual Charles	WATER COLORS		
-	- 82	MF	1	- Control	3 4	2.90	ADX	AN	1	CALL CALL STREET		SYALUE!	(D) See And
	98	MD32	15	1	44.5	14.	-	-	10000			0	designati
-	68	MF		9	44.5		ACK	W					derly Vontage 8
-	2	Me		1	0.0	000	YOU	W				-	to vest see
-	6 8	MINO	1		40 B F	1000	ADA	- AM	- 10 mm	The second second		and a	2 3
-	98	- 100		11	50.57	2.1	ADX	AN	200000	BAR SERVICE	THE PROPERTY OF PERSONS		1
	90	- Mr	CO (100)		2 /	0.3	ADX	AN	MARKET SEA	COUNTY AROSE SALES	SELECTION SECTIONS	WALUE	ŏ
1	99	MD43	11	3400	30.5/	15.7	- AGA	***	Charles of	200 MAY 12 CAN	THE PROPERTY OF THE PARTY OF TH	30	5
1	120	MF	200	/ 6	30.5 /	2.5 /	ADX	AN	- Charles	STATE SEVER STATE	DOMOGRAPHIC TO		Ħ
1	98	MF	1	10 6	7 56	1.8 /	ADX	AN	TOO ME	STATE AND DESCRIPTION OF THE PERSON OF THE P	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW		5
S	98	MF		11/	1 9	0.0	YOX	W	1	The second second		1	ð
	8	MF	1		447	14.	YOY	W				WALDE	NOW
3	810	MC11	7 0	1	17.5	м	-					- 1	Amostile
9	910	MB	1	12.	0	7	ADA	W				710	Tram-A
3	810	MCII		-	118.0	1	ALC:	-				1	N C
1	0 0	Mere	100	0	7.5		ADA	NA.	1	200		I.	
(200	100	H	100	199	000	AUX	AN	The same	State of the Party of the State	TO SECOND	L	
1:	22	MO11	111		27.51	1	ADX	AN	Colone Colone	がと さい 大い	CONTRACTOR OF STREET	T.	
3	E2	MF	1	15/	162	21	ADX	AN	1531531	STATE OF STREET	THE PERSON NAMED IN		
7	23	4	12/	18 /	21.8/		ADX	AN	ST. T.	Albert Carlo	STATE OF STREET	100	
7	64	MD22	13 /	1	20 /	16 /	YOY	AN	Total State	大小 はのけるしい	The second secon	-	
-	E4	MF		17.	36.54	2	YOX	AN				-1	(t) Pepu
-	9		1	. 0	1	80	ADX	W				1	analyzed up
	2	100		100	200		2000	200				_	analysis
	72	MOSS	18/	and and	10	17.	AUX	W	1	Control of the last		TE.	Ċ
	3	100		200	10	250	ADX	AN	STATE OF THE PARTY OF	STREET, STREET	CAST CHILD COST	Isi	
-	E4	MD11	16 /	11/11/11	2251	15	ADX	AN	Aller Sales	William Agent with	CHARLES OF THE PARTY OF THE PAR	I :	ERROR OC
-	12	- Mr	1811404	21 /	22.5 /	114	ADX	AN	STATE OF THE PARTY OF	STORY SALES	Service Services	le:	4
2	P	Q	西田田田田田 田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田	National Property	SPATING.	周	を ないないない	STANSON S	SCHOOL SECTION	日本 ののの ののの	STATE OF THE PERSON	tol	8
7	AS	MO22	111	ACRES A		36 /	-	AN	Contract Contract	STATE THOUGHT	The state of the s	-	O
23	AS	MF	1900.9%	22 /	18 /	2.5 /	24	AN	Charles Co.	STATE OF THE PARTY	THE RESIDENCE SPACE		۵
2	VS	M	1	707		225 \$	М	AN	The Control of	一年 日本の	State of the State	-	w
7	AB	ta.	18	24 /		0.85	ш	AN		STATE OF STA		-1	M.
2	W	MOTT	18	1	18 /	9	ADX	AN				1	U
2	2	N.	7	25 7	2		1	W				1	
	90	MOLI	20.0	100	40	1	YOU	Y				T	
,	940	Tables .	100	ę	60	100	ALA			The second second		T	
	2 54	WE THE	4 19	100	100	18.	ACA	200				Т	
000	D ATO	a u	100	28/	16.7	1	ADX	AN		The Control of the		·	
2	A10	+HOM	21.7		177	1	ADX	NA	1000	000000000000000000000000000000000000000	The same of the sa	F	
2	A10	Mr	As hope -	29 /	14/	19	ADX	AN	4-4-15-1-A	Part Color 1975	1	E	
24	Ct	MD11	24.6	-	40 %	16./	-ADX	1	PART AND A S. P.	19-730-1955pt-1853	THE PARTY AND VALUE OF THE PARTY OF THE PART		
2	C	MF		S	1 07	0	ADX	AM	1 X 3 1 X 3 1 X	HER STATES OF STATES	THE RESERVE THE PERSON NAMED IN		
2	8		25 /	31 4	9.0	2	Ġ	AM	- 222	CONTRACTOR OF THE PERSON OF TH	TO SHEET STORY OF THE PARTY OF	5.1	
2	3	+	20 /	b	32.5 /	F		AN	PROPERTY.	一年 一十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二	THE PERSON AND PERSON	21	
2	C10	7	27 /	Į.	21.1	9 9	VDX	AN	1000		SOUTH THE SECOND		
2	C10	MF		23 /	21.1	1	YOY	AN	1	STATE OF THE PARTY		1	
							THE PERSON NAMED IN		No.			7	
												1	
1												Т	
		-						STATE OF THE PARTY		-		1	
									S. C. Line	THE REAL PROPERTY.	THE RESERVE THE PERSON NAMED IN		



X000'01

ATED MOTES:

r dinaemtona either in absorbale units in screen eithe. If reported as units, confirm that the Largith & len Eceles are set as appropriate,

Annex D of IBO10312 lar

Bend Types

siles Solid satisfan saries: Ammike, cammike-granesties
-Act Solid satisfan series: Ymmoties-Actioosite
-Act Solid sakaidon series: Ymmoties-Actioosite
-Act Solid sakaidon series: Ymmoties-Actioosite
- Actioosite Com Cerestrickon Servicient Selections:
- Sepainties
- Westerstein
- Michaelle
- Michaelle
- Sistonite
-

volate this flaid only if sample was ad using more than one hashument, is than one snelyst, or across multiple is dates.

- QOODES:
 Primary/Total entry is not sequential
 Memori disse type is not valid
 Structure disses type is not valid
 Structure specially in the valid
 Structure special in the valid
 structure special in structure type column
 8 structures > tem valin complex do not match information provided in structure type column
 structure type with complex does not match information provided in structure type column
 structure type with complex does not match information previded in structure type column
 identified as non-countable structure (stall = 0) without comment

APPENDIX D Communications Sapphire Mine Verification/Validation Report February 2008

Losurdo, Antonio

From:

Losurdo, Antonio

Sent:

Tuesday, November 27, 2007 2:43 PM

To:

'brass.brian@epamail.epa.gov'

Cc:

Soroka, Joseph M; Killeen, Deborah A; Losurdo, Antonio; Schmidt, Howard D

Subject:

Sapphire Valley 1 Day 1 Data (WA#0-253)

Hi Brian,

As per your request, I examined the asbestos analysis (ISO10312:1995 and PCME) for the Sapphire March 2007 results provided in the electronic spread sheets (Data Entry 1, Data Entry 2 and NADES Report). The electronic data were compared with hand written laboratory data sheets to identify discrepancies which may impact the Certificate of Analysis Results Summary Table. The observed inconsistencies are recapitulated in the attached PDF file.

Please review the attached. If this is satisfactory, we can issue a final report or memo. If you need additional information/review let us know so that we may complete the project.

Thanks,

Tony



Sapphire_Asbestos _Final_0253.P...

Antonio Lo Surdo, Ph.D. Sr. Organic Analytical Chemist Lockheed Martin REAC Phone: 732-494-4012

Fax: 732-494-4021

E-mail: antonio.losurdo@lmc.com

ASBESTOS SPREAD SHEETS VALIDATION FOR SAPPHIRE VALLEY (Original Submitted Memo Report for Sapphire (1) WA# 0-253)

Twenty-six samples were examined for asbestos analysis (ISO10312:1995 and PCME). The results provided in the electronic spread sheets (Data Entry 1, Data Entry 2 and NADES Report) were compared with hand written laboratory raw data sheets to identify discrepancies which may impact the Certificate of Analysis Results Summary Table. The following summarize the inconsistencies found: laboratory

- Certificate of Analysis Results Summary Table listed filter pore size as 0.45 um vs. 0.800 um listed on the Data Entry 1 spread sheet.
- Several transcription errors for the Site/project identifier code on the Data Entry 1 spread sheets, i.e., 0-235 vs. 0-253, the correct project code.
- Several transcription errors between laboratory hand written sheets and Data Entry 2 spread sheets. See attached.
- COC transcription errors on Certificate of Analysis Results Summary Table, i.e., listed COC: 0-235-04/04/07-0002 and -0003 vs. 0-253-04/04/07-0002 and -0003.
- Several transcription errors between laboratory hand written sheets, Certificate of Analysis Results Summary Table and Data Entry 2 spread sheets for total number of structures detected in samples 0-253-0017 through 0-253-0019 of the PCME analysis. See attached.
- Transcription errors for total number of grids for sample 0-253-0021 between Certificate
 of Analysis Results Summary Table and NADES report spread sheet for the PCME
 analysis.
- Error Codes detected on Data Entry 2 spread sheets. See attached (Table 1.1).
- For samples 0-253-0017 to -0019, the reported concentration (s/cc) and density (s/mm2) should be revised due to errors in reported total structures detected. (See attached corrected entries).
- For sample 0-253-0021, the limit of detection (s/mm2), concentration (s/cc) and density (s/mm2) should be revised due to errors in the analytical sensitivity and # of grid openings. (See attached corrected entries).

Losurdo, Antonio

From: Brass.Brian@epamail.epa.gov

Sent: Monday, December 10, 2007 12:39 PM

To: Losurdo, Antonio

Cc: Losurdo, Antonio; Killeen, Deborah A; Schmidt, Howard D; Soroka, Joseph M; Hoppe,

Michael G; Schaefer.Joe@epamail.epa.gov

Subject: Re: Sapphire Valley 1 Day 1 Data (WA#0-253)

Tony,

The QA/QC procedures and format are fine. Please finalize. Also, please add a verification between the SCRIBE sample volumes and the NADES sample volumes by combining the 2 data sets and running a IF logic check in Excel. For example, IF SCRIBE volume equals NADES volume then TRUE.

Joe Schaefer and Olex have been involved with this check and it should all be done electronically.

Please call me with questions.

Joe Soroka, can you prioritize the Dunn County QA/QC to have it completed this week?

Brian Brass U.S. EPA /ERT-West 4220 South Maryland Parkway Building D Suite 800 bas Vegas, Nevada 89119 (702) 290-7081 Cell (702) 784-8001 Fax

> "Losurdo, Antonio" <antonio.losurdo @lmco.com>

> 11/27/2007 11:43 AM

Brian Brass/LV/USEPA/US@EPA

"Soroka, Joseph M"

<joseph.m.soroka@lmco.com>,

"Killeen, Deborah A"

<deborah.a.killeen@lmco.com>,

"Losurdo, Antonio"

<antonio.losurdo@lmco.com>,

"Schmidt, Howard D"

<howard.d.schmidt@lmco.com>

Subject

To

CC

Sapphire Valley 1 Day 1 Data

(WA#0-253)

Hi Brian,

As per your request, I examined the asbestos analysis (ISO10312:1995 and PCME) for the Sapphire March 2007 results provided in the electronic spread sheets (Data Entry 1, Data Entry 2 and NADES Report). The electronic data were compared with hand written laboratory data sheets to identify discrepancies which may impact the Certificate of Analysis Results Summary Table. The observed inconsistencies are recapitulated in the attached PDF file.

Please review the attached. If this is satisfactory, we can issue a final report or memo. If you need additional information/review let us know so that we may complete the project.

Thanks,

Tony

<<Sapphire Asbestos Final 0253.PDF>>

Antonio Lo Surdo, Ph.D. Sr. Organic Analytical Chemist Lockheed Martin REAC Phone: 732-494-4012 Fax: 732-494-4021

E-mail: antonio.losurdo@lmc.com

[attachment "Sapphire_Asbestos_Final_0253.PDF" deleted by Brian Brass/LV/USEPA/US]

Losurdo, Antonio

Brass.Brian@epamail.epa.gov From:

Sent: Monday, December 10, 2007 1:00 PM

Schmidt, Howard D To:

Cc: Losurdo, Antonio; Killeen, Deborah A; Schaefer.Joe@epamail.epa.gov; Soroka, Joseph M;

Hoppe, Michael G

RE: Sapphire Valley 1 Day 1 Data (WA#0-253) Subject:

Thanks Howard,

I was aware that the check had been done for Sapphire, the results of the check need to be mentioned in the QA/QC report with a brief statement that the check was run and all results verified or corrected.

I wanted to make sure the same verification was done for Dunn County and that a mention of the sample volume verification was included in the QA memo.

Brian Brass U.S. EPA /ERT-West 4220 South Maryland Parkway Building D Suite 800 Las Vegas, Nevada 89119 (702) 290-7081 Cell (702) 784-8001 Fax

> "Schmidt, Howard <howard.d.schmid

t@1mco.com>

12/10/2007 09:42

AM

To Brian Brass/LV/USEPA/US@EPA,

"Losurdo, Antonio"

<antonio.losurdo@lmco.com>

"Losurdo, Antonio"

<antonio.losurdo@lmco.com>,

"Killeen, Deborah A"

<deborah.a.killeen@lmco.com>,

"Soroka, Joseph M"

<joseph.m.soroka@lmco.com>,

"Hoppe, Michael G"

<michael.g.hoppe@lmco.com>, Joe Schaefer/ERT/R2/USEPA/US@EPA

Subject

CC

RE: Sapphire Valley 1 Day 1 Data (WA#0-253)

Brian,

The auto-check of sample numbers and sample volumes between NADES and SCRIBE has already been incorporated into an Excel Macro by Olex. It is run concurrently with the reformatting of the NADES spreadsheet into a .CSV that can be imported into SCRIBE

I have attached the Macro and renamed the extension. After downloading rename the extension .EXE

Howard

----Original Message----

From: Brass.Brian@epamail.epa.gov [mailto:Brass.Brian@epamail.epa.gov]

Sent: Monday, December 10, 2007 12:39 PM

To: Losurdo, Antonio

Cc: Losurdo, Antonio; Killeen, Deborah A; Schmidt, Howard D; Soroka,

Joseph M; Hoppe, Michael G; Schaefer. Joe@epamail.epa.gov

Subject: Re: Sapphire Valley 1 Day 1 Data (WA#0-253)

Tony,

The QA/QC procedures and format are fine. Please finalize. Also, please add a verification between the SCRIBE sample volumes and the NADES sample volumes by combining the 2 data sets and running a IF logic check in Excel. For example, IF SCRIBE volume equals NADES volume then TRUE.

Joe Schaefer and Olex have been involved with this check and it should all be done electronically.

Please call me with questions.

Joe Soroka, can you prioritize the Dunn County QA/QC to have it completed this week?

Brian Brass U.S. EPA /ERT-West 4220 South Maryland Parkway Building D Suite 800 Las Vegas, Nevada 89119 (702) 290-7081 Cell (702) 784-8001 Fax

> "Losurdo, Antonio" <antonio.losurdo @lmco.com>

> 11/27/2007 11:43 AM

Brian Brass/LV/USEPA/US@EPA

To CC

"Soroka, Joseph M" <joseph.m.soroka@lmco.com>, "Killeen, Deborah A"

<deborah.a.killeen@lmco.com>, "Losurdo, Antonio"

<antonio.losurdo@lmco.com>, "Schmidt, Howard D"

<howard.d.schmidt@lmco.com>

Subject

Sapphire Valley 1 Day 1 Data (WA#0-253)

As per your request, I examined the asbestos analysis (ISO10312:1995 and PCME) for the Sapphire March 2007 results provided in the electronic spread sheets (Data Entry 1, Data Entry 2 and NADES Report). The electronic data were compared with hand written laboratory data sheets to identify discrepancies which may impact the Certificate of Analysis Results Summary Table. The observed inconsistencies are recapitulated in the attached PDF file.

Please review the attached. If this is satisfactory, we can issue a final report or memo. If you need additional information/review let us know so that we may complete the project.

Thanks,

Tony

<<Sapphire_Asbestos_Final_0253.PDF>>

Antonio Lo Surdo, Ph.D. Sr. Organic Analytical Chemist Lockheed Martin REAC Phone: 732-494-4012 Fax: 732-494-4021

E-mail: antonio.losurdo@lmc.com

[attachment "Sapphire_Asbestos_Final_0253.PDF" deleted by Brian Brass/LV/USEPA/US]

[attachment "CheckNadesLabs.demo" deleted by Brian Brass/LV/USEPA/US]

Losurdo, Antonio

From:

Schmidt, Howard D

Sent:

Monday, October 29, 2007 7:30 AM

To:

Losurdo, Antonio

Subject:

RE: Data Entry for Sapphire Valley 1 Asbestos (WA#0-253)

Tony,

Yes... Sapphire Mine is 0-253...

Howard

From: Losurdo, Antonio

Sent: Friday, October 26, 2007 11:10 AM

To: 'brass,brian@epamail.epa.gov'

Cc: Schmidt, Howard D; Soroka, Joseph M; Losurdo, Antonio Subject: Data Entry for Sapphire Valley 1 Asbestos (WA#0-253)

For Sapphire Valley 1 the data package work assignment is 0-253. The project code on the NADES is 0-235. Should 0-235 be 0-253 on the NADES?

Thanks,

Tony

Antonio Lo Surdo, Ph.D. Sr. Organic Analytical Chemist Lockheed Martin REAC Phone: 732-494-4012

Phone: 732-494-4012 Fax: 732-494-4021

E-mail: antonio.losurdo@lmc.com

Appendix B
Final Laboratory Reports – Soil Analysis
Sapphire Mine
Verification/Validation Report
July 2009

Check List for RTP Delivery Package

Company:	Batta Laboratories, Inc.
EPA Job#:	EP-C-04-032
EPA COC#:	0-153-04/04/07-000/
Lab Job#:	N/A
	Summary Report
	Batta Data Sheet for the Summary Report
	Original EPA COC
N/A	AHERA/ISO Report Sheet (from EDD submitted)
N/A	Data Entry 1 Sheet (from EDD submitted)
NA	Data Entry 2 Sheet (from EDD submitted)
<u> </u>	Copy of Analytical Benchsheets
	Miscellaneous (Specified in the comment box below)

Case Narrative/Comment:

This summary report is pursuant to EPA purchase order EP074000155 (EPA Contact Number: EP-C-04-032) for sample shipment received on July 5, 2007, consisting of 6 batches of samples (categorized with RTP-3562 through RTP-3567) and a batch of 14 samples (COC# 0253-04/04/07-0001) for asbestos, soil moisture and soil particle size, respectively. Each summary report is submitted based on the batch number or COC number as shown on the cover page that comes with each delivery package. The version of report in this delivery package is current and is intended to replace any previous versions of all formats, including electronic submissions. Accompanying this package is a CD-ROM that contains all reports in PDF format and analytical data of each sample analysis in NADES' EDD format. A read-me file is also included within the CD-ROM, which explains how EDD files were organized in terms of sample batches and analytical methods. Please read the read-me file before viewing the content of the accompanying CD-ROM. All EDD files within the CD-ROM are in lieu of any versions of NADES' EDD submitted previously.

Note: Original copy was sent out on x8/28/2007.



August 28, 2007

ATTN: Nardina Turner
11th Floor, Superfund Division
USEPA Region 4 Mailroom
Suite 9T25, 9th Floor
Sam Nunn Atlanta Federal Center
61 Forsyth St. SW
Atlanta, GA 30303

Subject: Analytical Results of Asbestos, Soil Moisture and Particle Size

EPA Contract No.: EP-C-04-032

Site No.: 0-253

EPA COC No.: 0-253-04/04/07-0001

Dear Nardina,

Please find the attached analytical reports of the above referenced analyses, which include Asbestos Analysis using CARB 435 (Attachment #1), Soil Particle Analysis using ASTM D422-63 (Attachment #2), Soil Moisture Analysis using ASTM D4643-00 (Attachment #3). The initial reports of analysis of soil particle and moisture by Craig Testing Laboratories of Maryland, Inc. are also attached in Attachment #4. Chain of Custody is included in Attachment #5. Should you have any questions, please do not hesitate to contact me.

Best wishes,

Bo Li, Ph.D.

Manager of Microscopy Services

Batta Laboratories, Inc.



ATTACHMENT #1

Certificate of PLM Analysis (CARB 435 Method)



EPA LAB ID #DE004

BATTA LABORATORIES, INC.

A Certified MBE Company
Delaware Industrial Park, 6 Garfield Way
Newark, DE19713-5817
Tel. (302)737-3376 Fax (302) 737-5764



Report Date:

Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF PLM ANALYSIS

Test Method: State of California Air Resources Board Method 435

Page 1 of 3

8/27/2007

			CSL MICHIO	a. Olale of e	amonna / m	, 10000			0,27,200
Samplin	g Data							Date Sampled:	3/28/2007
BLI Proje		L537807						Sampled By:	CLIENT
Project N	lame:	596607-RTP-EPA	SAMPLE	S				Date Analyzed:	7/30/2007
	ole ID	Client-sup	plied Da	ata	Physic	al Data	R	eported Results	
Lab	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Non-asbestiform Components	Asbestiform Co	omponents
559778	0-253- 0049	CHISEL-DAY 1	bulk	n/a	firm	brown	85% non-fibrous	15% anthophyllite (Visaul Estimate)	asbestos containing
559779	0-253- 0050	SHOVEL-DAY 2	bulk	n/a	firm	gray	97.75% non-fibrous	2.25% anthophyllite	asbestos containing
559780	0-253- 0051	OSC-UPPER SITE	bulk	n/a	firm	brown	96.75% non-fibrous	3.25% anthophyllite	asbestos containing
559781	0-253- 0052	OSC-UPPER SITE DUP	bulk	n/a	firm	brown	94.5% non-fibrous	5.5% anthophyllite	asbestos containing
559782	59782 0-253- RAKE-D		bulk	n/a	firm	brown	93% non-fibrous	7% anthophyllite	asbestos containing

Organically-bound, nonfriable material may interfere with the accurate quantification of asbestos. In these cases, the EPA recommends more definitive analysis by a matrix-reduction method (i.e. Chatfield SOP-1988-02, Rev.1)

Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. Due to this, the EPA recommends more definitive analysis using analytical electron microscopy.

ANALYST: Asghar Keyvanfar

REVIEWED BY: 1 08/28/97

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Due to the general heterogeneity of asbestos containing materials (ACM), EPA and OSHA have recommended submission of at least three samples of each type of materials for PLM analysis. Submission of fewer samples may compromise the accuracy of ACM determination.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.



EPA LAB ID #DE004

BATTA LABORATORIES, INC.

A Certified MBE Company Delaware Industrial Park, 6 Garfield Way Newark, DE19713-5817 Tel. (302)737-3376 Fax (302) 737-5764



Report Date:

Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF PLM ANALYSIS

Test Method: State of California Air Resources Board Method 435

Page 2 of 3

8/27/2007

Samplin	g Data							Date Sampled:	3/28/2007
BLI Proje	_	L537807						Sampled By:	CLIENT
Project N		596607-RTP-EPA	SAMPLES	S				Date Analyzed:	7/30/2007
Samı	ole ID	Client-sup	plied Da	ıta	Physic	al Data	R	eported Results	
Lab	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Non-asbestiform Components	Asbestiform Co	omponents
559783	0-253- 0054	RAKE-DAY 1 DUP	bulk	n/a	firm	brown	93.75% non-fibrous	6.25% anthophyllite	asbestos containing
559784	0-253- 0055	RAKE-DAY 2	bulk	n/a	firm	brown	96.25% non-fibrous	3.75% anthophyllite	asbestos containing
559785	0-253- 0093	CHISEL-DAY 2	bulk	n/a	firm	brown	88% non-fibrous	12% anthophyllite (Visual Estimate)	asbestos containing
559786	0-253- 0094	CHISEL-DAY 3	bulk	n/a	firm	brown	90.75% non-fibrous	9.25% anthophyllite	asbestos containing
559787	0-253- 0095	SHOVEL-DAY 3	bulk	n/a	firm	gray	100% non-fibrous	trace anthophyllite	non-asbestos containing

Notal Organically-bound, nonfriable material may interfere with the accurate quantification of asbestos. In these cases, the EPA recommends more definitive analysis by a matrix-reduction method (i.e. Chatfield SOP-1988-02, Rev.1)

Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. Due to this, the EPA recommends more definitive analysis using analytical electron microscopy.

ANALYST: Asghar Keyvanfar

REVIEWED BY: 1 8/28/28/07

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Due to the general heterogeneity of asbestos containing materials (ACM), EPA and OSHA have recommended submission of at least three samples of each type of materials for PLM analysis. Submission of fewer samples may compromise the accuracy of ACM determination.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.



BATTA LABORATORIES, INC.



A Certified MBE Company Delaware Industrial Park, 6 Garfield Way Newark, DE19713-5817 Tel. (302)737-3376 Fax (302) 737-5764



Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF PLM ANALYSIS

Page 3 of 3

		,	Test Method	d: State of C	alifornia Air	Resources	Board Method 435	Report Date:	8/27/2007
Samplin	g Data							Date Sampled:	3/28/2007
BLI Proje	-	L537807						Sampled By:	CLIENT
Project N		596607-RTP-EPA	SAMPLES	3				Date Analyzed:	7/30/2007
	ple ID	Client-su	oplied Da	ita	Physic	al Data	R	eported Results	
Lab	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Non-asbestiform Components	Asbestiform (Components
559788	0-253- 0096	RAKE-DAY 3	bulk	n/a	firm	brown	97.25% non-fibrous	2.75% anthophyllite	asbestos containing
559789	0-253- 0100	OSC-JLW2	bulk	n/a	firm	brown	95.75% non-fibrous	4.25% anthophyllite	asbestos containing
559790	0-253- 0101	OSC-JLW3	bulk	n/a	firm	gray	96.5% non-fibrous	3.5% anthophyllite	asbestos containing
559791	0-253- 0102	OSC-JLW1	bulk	n/a	firm	gray	98.25% non-fibrous	1.75% anthophyllite	asbestos containing

Note: Organically-bound, nonfriable material may interfere with the accurate quantification of asbestos. In these cases, the EPA recommends more definitive analysis by a matrix-reduction method (i.e. Chatfield SOP-1988-02, Rev.1)

Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. Due to this, the EPA recommends more definitive analysis using analytical electron microscopy.

ANALYST: Asghar Keyvanfar

REVIEWED BY: 1/28/37

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Due to the general heterogeneity of asbestos containing materials (ACM), EPA and OSHA have recommended submission of at least three samples of each type of materials for PLM analysis. Submission of fewer samples may compromise the accuracy of ACM determination.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.

Refractive Index Oil Calibration Workshe.

Single Liquid Method - Dr Su 1993 Manuscript

Start with: $n_D^{S} = n_D^L + (\Delta^L - \Delta^S) * K_i$

Becomes: $n_D^L = n_D^S \cdot (\Delta^L - \Delta^S) * K_1$

Where: $n_D^L = Index$ of refraction of the liquid

 n_D^S = Index of refraction of the solid

 $\Delta^{L}=$ Dispersion coefficient of the liquid

 $\Delta^{\rm S}=$ Dispersion coefficient of the solid

k_i = Conversion constant (from the matching wavelength to Hartman's Constant)

			•		
Libet#jorRbFOlls:	90)	9690	とひつ	2060	
Galoulatedund Part	27- 1:5-49972	12502911	1 184702.1	bh9h とグリ	
Temp (O) at Calibration				,	>
Factor Factor	0) (0	0)10-	6110 -	01.0	
#Wavalength:	570	613	019	573	
	10.0491EF	000476 0001226	000449 - 0.01570 -		000460====0.01343==
RG#gilje/Value	58- .0.0272- .0.000)348 0	243	275	353 60.0299 50.040
n Date Transcoller Regardiller Progression (n. 689)	1 550 F 1 55158 F		094/	[11625] [6] [6] [6] [6] [6] [6] [6] [6] [6] [6	》。 第1640章 [11] 64
	7.9	•			

1=570 KD=0.10 MLO = 1.551 JY - (0.0172 - 0.0112) X 0.10

21 bb h 5 1 = 0 - W

1,67827 - (000348-0,01226) X-0010 No = 10 1 0 10 - 100 10

N. CO. L. 68 o S. 24

P10-x (21210-0-54300) - 58502. AND THE WORLD TO SELLE THE SELLE THE

MET 17 O IX 02 23

-QA/QC Mgr. Signature

(3.0275- 0.01754) X 01(0

Analyst Signature

Lab Job#	N/A		BLI Pr	oject#	L537807	-	Name	of Clie	ent	/Project	t: <u>59</u>	3607				·	
Sample	• Type ¹	Visual Gross ²		Sample Color		Friability ⁴	Sample Texture ⁵	Morpholog	3y ⁶	Fiber Color ⁷ (in plane light)	Pleochroi	111	1	Asbestos Types ¹²	Types ¹³	Optical/Morph. Characteristics ¹⁴	Non-Fibrous
1 pipe insulation 2 pipe elbow 3 roofing material	6 acoustical tile 7 linoleum 8 floor tile	1 Hamogenous 2 Helerogenous	1	7 brown 8 blue 9 white 10 red	13 orange 14 various 15 other	Friable or Nonfriable	1 cementic. 2 granular 3 fibrous 4 firm	1 wavy 2 straight 3 splayed en 4 fiber bundl 5 single fiber	es	1 clear 2 lan 3 blue	1 no 2 y	es E	parallel : oblique	chrysotile mosite crocidolite anthophyl tremolite	2 fiberglass	1 undulose ext. 2 isotropic 3 shot 4 morphology 5 mull.elon.(flips)	1 matrix 2 binder 3 CaSO₄ 4 CaCO₂ 5 Mica
4 soil 5 fire-proofing	9 mastic/adhesive 0 other	3 Layered	5 sliver 6 gray	11 green 12 pink			5 soft 6 paper-like	6 blocky	'S	4 brown 5 other	if yes, give			actinolite	other	other	6 other
Sample Locat							1		····	n/	733V			Z Eibroun b	on-Asbesios Type	. (12)	Analyst's
	Sample Desc Client-Supplied Data	riptions Macroscopic	Asbes Ontical P	roperties		tos #2 roperties		roperties	١-,	% Asbestos T /AE/Point Cour			'AE/Point Co			aracteristics 14	Notes
Lab Sample #	Onem Coppined Data	Mosiosaspio	Morph ⁶	n _D II	Morph ⁶	nD II	Morph ⁶	n _D II		Asb Counts:			Fiber				
559778	Sample Type 1	Visual Gross ²	Fiber Color ⁷	1.627 n _D 1	Fiber Color ⁷	nD ⊤	Fiber Color ⁷	пр⊥	4	VAE	13.		Counts:		-		
	0			1417	я	. 10		10	ŀ	Asb Counts:	- -	+	Fiber				
Field Sample #	Friability ⁴	Sample Color ³	Pleachroism	Extinction ¹⁰	Pleochroism ⁶	Extinction ¹⁰	Pleochroism	Extinction 10		VAE			Counts:	_	_		
0.050.0040	F 11	Texture ⁵	Biref. ⁹	,	Biref. ⁹	Fl11	Biref. ⁹	Elongation 11	-	Asb Counts:	\dashv	\dashv	Fiber	-			
0-253-0049- PC	ForN		Biret.	Elongation ¹¹	Birei.	Elongation '	Dilei.	Ciongation		VAE	-	_	Counts:		_		
		¥	<u> </u>	LT_		<u> </u>	<u> </u>	<u> </u>	<u> </u>	I				ous Types ¹	5 Per	centage	
Asbestos-C	ontaining,	Non-A	Sbestos	-Contair	ing 🗆	An	alytical	Viethod:		兹		W		- (8		
Sample Local	tion /from Cha	ain of Cus	tody).					کی	el	bo H	0 PV1				•		
Sample Local	Sample Desc			e #1	Тур	e #2	Тур	e #3	Γ.	% Asbesto		Ī			ıs Non-Asbeslos (1		Analyst's
Lab Sample #	Client-Supplied Data	Macroscopic	Optical P		Optical P	roperties nD II		roperties	01	/AE/Point Cour	P! 9	<u> </u>	AE/Point Co	unt %	Optical Ct	paracteristics 14	Notes
	Sample Type ¹	Visual Gross ²	Morph ⁶	1.629	Morph ^b	וושיי	Morph ⁶		1	Asb Counts	1 2.	2.J-	Fiber Counts:				
559779			Fiber Color ⁷	n _D ⊥1	Fiber Color ⁷	nD Ţ	Fiber Color ⁷	uD T	1	VAE			VAE		7		
	0	——	- 1 .	1.617		10		10	_	 	-	+	Fiber	-			
Fleid Sample #	Friability ⁴	Sample Color ³	Pleochroism	Extinction ¹⁰	Pleochroism ⁸	Extinction "	Pleochroism ⁸	Extinction		Asb Counts:			Counts:				
		6	,	1					L	VAE			VAE				
0-253-0050-	F or N	Texture ⁵	Biref. ⁹	Elongation 11	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Etongation ¹¹		Asb Counts:			Fiber Counts:	·			
PC	-	V	l l	4						VAE			VAE				
				·				W-411-					Nonfibr	ous Types		centage	
Asbestos-C	ontaining	Non-A	sbestos	-Contain	iing 🗆	Ап	alytical i	vietnoa:					L	6	197.	75-	İ
Sample Locat																	
	Sample Desc Client-Supplied Data	riptions Macroscopic	Type Optical P		Type Optical P	roperties		roperlies	 	% Asbesto /AE/Point Cou		. ,	AE/Point Co		s Non-Asbestos (1 Ontical Ch	aracteristics ¹⁴	Analyst's Notes
Lab Sample #	Oncin Supplied Data	, made and pro-	Morph ⁶	II Q ⁿ	Morph ⁶	nD II	Morph ⁶	uD II	4	Asb Counts	-	2	Fiber				
559780	Sample Type	Visual Gross ²	Fiber Color ⁷	1.(20	Fiber Color ⁷	nD ⊤	Fiber Color ⁷	ųDΤ	ľ	- 51	40	7	Counts:				
	٧			1.413					_	VAE		_ _	Fiber				
Field Sample #	Friability ⁴	Sample Color ³	Pleochroism ⁸	Extinction 10	Pleochroism ⁸	Extinction 10	Pleochroism ⁸	Extinction 10		Asb Counts:		- ⋅	Counts	<u> </u>	_		
	,	7								VAE			VAE				
0-253-0051-	F or N	Texture ⁵	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Elongation 11	Biref. ⁹	Elongation 11		Non-empty Counts:			Fiber Counts:				
PC	-	4	1	ŕ						VAE			VAE				
		Non A	-5	Contain			alytical l	Mothod			_		Nonfibr	ous Types ¹	9.6.	centage	
Asbestos-C	ontaining u	NOII-A	sbestos	-coman	ing b	All	aryticari	victiou.					L		1 9.6	<i></i>	l
Sample Locat	*				-		7	e #3		% Asbesto	- (12)			% Eibrou	s Non-Asbestos (1	3)	Analyst's
Lab Sample #	Sample Desc Client-Supplied Data	Macroscopic	Type Optical P		Type Optical P		Optical P		_	/AE/Point Cour		. V	AE/Point Co			aracteristics 14	Notes
Lao Sample #		2	Morph ⁶	uD II	Morph ⁶	ηD II	Morph ⁶	uD II	4	Asb County	5.	+	Fiber Counts				
559781	Sample Type	Visual Gross ²	Fiber Color ⁷	1.25/L	Fiber Color ⁷	пDТ	Fiber Color ⁷	n _D ⊥		VAE	4	1	VAE		_		
	0	1	4	1614					_	VAC			<u> </u>		_		
Field Sample #	Friability ⁴	Sample Color ³	Pleochroism ⁸	Extinction to	Pleochroism ⁸	Extinction 10	Pleochroism ⁸	Extinction ¹⁰		Asb Counts:		_	Fiber Counts				
Ticio Gampie ii	rnabinty	7	1	1						VAE			VAE				
0-253-0052-	ForN	Texture ⁵	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Elongalion ¹¹	Biref. ⁹	Elongation 11		Asb Counts:	1	T	Fiber Counts				
PC .		<u></u>	1	4						VAE	+	\dashv	VAE				
													Nonfibr	ous Types ¹	Per	centage	
Asbestos-C	ontaining 🗆 📗	Non-A	sbestos	Contain	ing 🗆 📗	An	alytical l							6	194.	\mathcal{L}	
							D	ate of A	۱na	alysis:	7 -	30	- <i>-</i> ->		Analyst:	Ak	(

- Analytical Methods:
 1. EPA/600/R-93/116 Without Gravimetry
 2. EPA/600/R-93/116 With Gravimetry
 3. EPA/600/R-93/116: 400 Point Count

- 4. EPA/600/R-93/116: 1000 Point Count 5. PLM NOB Chatfield Method 6. NYDOH ELAP 198.1 (Modified): Matrix Reduction
- 7. State of New Jersey DOLAWD Method (38 N.J.R. 2526)
- 8. Other (specify):

l ab	Job	#	N/A	
$\perp \alpha \nu$	$\sigma \sigma \sigma$	77		

BLI Project # L537807

Name of Client/Project: 596607-RTP-EPA SAMPLES

Lab Job m				i ojoot ii		•	rvanne	or Onem	or rojec						
		Visual			3		Sample	6	Fiber Color ⁷	R	<u>Bire</u> 9	Asbestos	Non-Asbestos	Optical/Morph.	Non-Fibrous
Sample	Туре	Gross ²		Sample Cold	or ³	Friability"	Texture ⁵	Morphology	(in plane light)	Pleochroism	1 lo 3 Hi	Types 12	Types ¹³	Characteristics 14	Types ¹⁵
			1 black	7 brown	13 orange		1 cementic.	1 wavy	1		2 medium	1 chrysotile	1 cellulose	1 undulose ext.	1 matrix
1 pipe insulation	6 acoustical tile	1 Homogenous	2 tan	8 blue	14 various	Friable	2 granular	2 straight	1 clear	1 no 2 yes	Extinction 10	2 amosite		·	2 binder
2 pipe elbow	7 linoleum	l	3 gold	9 white	15 other	or	3 fibrous	3 splayed ends	2 tan		1 parallel	3 crocidolite	3 mineral wool	3 shot	3 CaSO₄
3 roofing material	8 floor tile	2 Heterogenous	4 yellow	10 red		Nonfriable	4 firm	4 fiber bundles	3 blue	l	2 oblique	4 anthophyllite	4 synthetic fibe	4 morphology	4 CaCO₂
4 soil	9 mastic/adhesive		5 silver	11 green			5 soft	5 single fibers	4 brown	if yes, give color	Elongation 11	5 tremolite	5 wollastonite	5 mult.elon.(flips)	5 Mica
5 fire-proofing	0 other	3 Layered	6 gray	12 pink			6 paper-like	6 blocky	5 other	İ	+ or -	6 actinolite	other	other	6 other

Sample Location (from Chain of Custody):___

	Sample Desc	-11			Asbes	ina #1	Asbes	toe #2	I Arbor	tos #3	T	% Asbestos Type	(12)		% Fib	rous Non-	-Asbestos Type (13)	Analyst's
		, 									<u> </u>	<u></u>	,					4 ' 1
Lab Sample #	Client-Supplied Data	Macr	roscopic		Optical P	roperties	Optical P	roperties	Optical F	Properties	\	/AE/Point Count	%	VAE	Point Count	%	Optical Characteristics 14	Notes
Can Settible #				Mo	orph ⁶	uD II	Morph ⁶	uD II	Morph ⁶	nD II	,,	45_	-		Fiber			
	Sample Type ¹	Visua	l Gross ²		7	1.626					7	Asb Counts:	7	JL	Counts:			
559782				Fiber	r Color ⁷	uD ⅓	Fiber Color ⁷	nD ⊥	Fiber Color ⁷	uD ⊤]	VAE		1 [VAE			
	Ç		1		1	1.16						VAE			VAE]
Field Sample #		Samp	le Color ³	Pleoc	:hroism ⁸	Extinction 10	Pleochroism ⁸	Extinction 10	Pleochroism ⁸	Extinction 10		Asb Counts:		ا ل	Fiber Counts:			
rielu Sample #	Friability ⁴	-	<u> </u>	١		1						VAE			VAE			
0-253-0053-	F or N	Te	xture ⁵	Bi	iref. ⁹	Elongation 11	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Elongation ¹¹		Asb Counts:			Fiber Counts:			
PC			4	1		4						VAE			VAE			
V															Nonfibrous T	Types 15	Percentage	
Asbestos-C	ontaining 💅		Von-A	Sbe	stos	-Contain	ing 🗆	. Ar	alytical l	Wethod:					6		93	

Sample Location (from Chain of Custody):

Sample Loca																
	Sample Desc	riptions	Турі	e #1	Тур	e #2	Тур	e #3	<u> </u>	% Asbestos (1	2)	<u> </u>	% !	Fiberous I	Non-Asbestos (13)	Analyst's
Lab Sample #	Client-Supplied Data	Macroscopic	Optical P	roperties	Optical P	roperties	Oplical F	roperties	\	/AE/Point Count	%	1	E/Point Count	%	Optical Characteristics 14	Notes
Lab Saltiple #			Morph ⁶	uD II	Morph ⁶	II G ⁿ	Morph ⁶	uD II	11	Seb County	4 9	_	Fiber			
	Sample Type ¹	Visual Gross ²	9	1.629					7	Asb County	2		Counts:			
559783			Fiber Color ⁷	nD ⊥ /	Fiber Color ⁷	uD ⊤	Fiber Color ⁷	uD ⊤]	VAE		1	VAE			İ
	U	1		1.215					L	VAL.			7			j
Field Sample #	Friability ⁴	Sample Color ³	Pleochroism ⁸			Extinction 10	Pleochroism	Extinction 10		Asb Counts:		:	Fiber Counts:			
ried dample in	Priability	7	,	.1						VAE			VAE			
0-253-0054-	ForN	/ Texture ⁵	Bilef. ⁹	Elongation ¹¹	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Elongation 11		Asb Counts:			Fiber Counts:			
PC		4		4					1	VAE		1	VAE			
				<u> </u>			·				_		Nonfibrous T	voes 15	Percentage	
Ashestos-C	ontaining n	Non-A	sbestos	Contain	ina n	Δr	alvtical i	Method:			1		7		9375	1

Sample Location (from Chain of Custody):

•	Sample Desc	riplions		Тур	e #1	Туре	e #2	Тур	e #3	Π	% Asbestos (1	2)	T		%	Fibrous N	on-Asbestos (13)	Analyst's
Lab Sample #	Client-Supplied Data	Macro	oscopic	Optical F	roperties	Optical P	roperties	Optical F	roperties	'	/AE/Point Count	%		VAE/Point (Count	%	Optical Characteristics 14	Notes
Lab dample #				Morph ⁶	nD II	Morph ⁶	uD II	Morph ⁶	uD II	11	Ash Causia	1.	T	Fiber				
	Sample Type ¹	Visual	l Gross ²	2	1.029]				14	Asb Counts;	3.	小	Counts:				
559784				Fiber Color ⁷	uD ⊤,	Fiber Color 7	пDТ	Fiber Color ⁷	uD ⊤		VAE		٦.	VA	_			
	D			,	1.00						VAC		\perp					
Field Sample #		le Color ³	Pleochroism ⁸		Pleochroism ⁸	Extinction 10	Pleochroism ⁸	Extinction 10		Asb Counts:			Fiber Counts					
ried dample #	rnadusty	,	emple Color ³ P	- 1	4						VAE			VA	E			
0-253-0055-	ForN	Tex	dure ⁵	Biref. ⁹	Elongalion ¹¹	Biref. ⁹	Elongation 11	Biref. ⁹	Elongation 11		Non-empty Counts:			Fiber Counts:				
PC	_	/	4	(7		_				VAE			VA				
														Nonfi	brous T	vpes ¹⁵	Percentage	
Asbestos-C	ontaining 🗹	lon-A	sbestos	ing 🗆	An	alytical l	Vlethod:			1		[6	96025			

Sample Location (from Chain of Custody):

oampie Loca	Sample Desc			Тур	≥ #1	Тур	= #2	Тур	e #3	T	% Asbestos	(12)		Т	%	Fibrous N	Ion-Asbestos (13)	Analyst's
Lab Sample #	Client-Supplied Data	Macros	copic	Optical P	roperties	Optical P	roperties	Optical F	roperties		/AE/Point Count		%	VA	Point Counts	%	Optical Characteristics 14	Notes
Lau Sample #				Morph ⁶	nD II	Morph ⁶	II Qn	Morph ⁶	nD II		Asb Counts:			П	Fiber			
	Sample Type ¹	Visual 0	3ross ²	7	1.17				١ '	日	ASD COURS.				Counts			
559785				Fiber Color ⁷	n _D 1′	Fiber Color ⁷	n _D ⊥	Fiber Color ⁷	uDТ]	VAE	Τ.			VAE			
	0			1	1-115					4	V/1C		2_		,,,,			
		Sample	Color ³	Pleochroism ⁸	Extinction 10	Pleochroism ⁸	Extinction 10	Pleochroism ⁸	Extinction 10	,	Asb Counts:				Fiber			
Field Sample #	Friability ⁴					,				-	<u> </u>	- -		1	Counts			
]	_	7	1	1						VAE	-			VAE			
0-253-0093-	ForN	Textu	_{17.0} 5	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Elongation 11	Biref. ⁹	Elongation ¹¹		Asb Counts:	Т			Fiber			
	1 0114	TEXT		Diret.	Librigation	D#C1.	Librigation	Diret.	Liongation		L]	Counts			
PC	-	(P		نک					l	VAE				VAE			
															Nonfibrous T	ypes 15	Percentage	
Asbestos-C	ontaining 🗸	N	on-A	sbestos	Contain	ing 🗆	An	alytical l	Vlethod:							6	AF	

Analytical Methods:

- 1. EPA/600/R-93/116 Without Gravimetry
- 2. EPA/600/R-93/116 With Gravimetry
- 3. EPA/600/R-93/116: 400 Point Count
- 4. EPA/600/R-93/116: 1000 Point Count
- 5. PLM NOB Chatfield Method
- 6. NYDOH ELAP 198.1 (Modified): Matrix Reduction
- 7. State of New Jersey DOLAWD Method (38 N.J.R. 2526)

Analyst:

ΑK

8. Other (specify):

Date of Analysis: 7-70-5)

Name of Client/Project: 596607-RTP-EPA SAMPLES BLI Project # L537807 Lab Job # N/A Visual Bire Non-Fibrou Sample Type Sample Color3 Friability⁴ Types¹⁵ Types 12 Types 13 Characteristics 1 Gross lo 3 Hi cellulos undulose ext. 7 hrawn 13 prance cementic 2 medium 2 isotropio granulai amosite 2 fiberglass 2 binder Friable straight Extinction 1 pine insulation 6 acoustical tile 2 tan 8 blue 14 various 9 white 15 other_ 3 fibrous splayed ends ! tan 1 narallel 3 crocidolite 3 mineral wool 3 shot Caso. 7 linoleum 3 gold 2 pipe elbow or 4 yellow 2 oblique 4 anthophylli 8 floor tile 10 red 4 firm liber bundles 3 blue 4 synthetic fibe 4 morphology 4 CaCO₂ 3 roofing materia Nonfriable 5 tremolite 5 wollastonite 5 mult.elon.(flips) 5 Mica 5 soft 5 single fibers 4 brown Elongation 9 mastic/adhesive 5 silver 11 green 4 soil 6 paper-lik 5 blocky 5 other + or -6 actinolite 6 other 5 fire-proofing 0 other 6 gray Sample Location (from Chain of Custody): % Asbestos Type (12) % Fibrous Non-Asbestos Type (13) Analyst's Sample Descripti Asbestos #1 Asbestos #2 Asbestos #3 Notes Optical Properties Optical Properties Optical Propertie VAE/Point Count VAE/Point Count % Optical Characteristics Client-Supplied Data Macroscopio Lah Sample # Morph nD II uD II uD II Fibe 9. Ash Coun Counts Sample Type 162 559786 n_D I n_D I Fiber Color Fiber Colo VAE VAE Ô 41 Fibe Extinction 10 sb Counts Sample Color³ Planchroise Plenchroism Extinction Pleochroism Extinction¹ Counts Field Sample # Friability 1 VAE Fiber Texture⁵ F or N Biref.⁹ Elongatio Biref.9 Elongation Biref.9 Elongation Asb Counts 0-253-0094 Counts PC VAE Percentage Nonfibrous Type: Analytical Method: 90 - 75 Non-Asbestos-Containing Asbestos-Containing & Sample Location (from Chain of Custody): % Fiberous Non-Asbestos (13) Type #1 Type #3 % Asbestos (12) Analyst's Sample Descriptions Type #2 Optical Properties VAE/Point Count % VAE/Point Count % Optical Characteristics 14 Notes Optical Properties Client-Supplied Data Macroscopic Optical Properties Lab Sample # n_D II nD II uD II Marph⁶ TR Fibe Asb Count 1.628 Count Sample Type n_D 1 nD T 559787 D_{\perp} Fiber Colo Fiber_Color VAE 1.610 Extinction¹ Extinction¹ Asb Counts Sample Color Counts Field Sample # Friability' VAE VAE 6 Asb Counts F or N Texture⁵ Biref.9 Elongation Biref.9 Elongation Biref.9 Elongation 0-253-0095-Counts PC VAE VAE Nonfibrous Types 15 Percentage 60 Analytical Method: Asbestos-Containing Sample Location (from Chain of Custody): Type #3 % Asbestos (12) % Fibrous Non-Asbestos (13) Analyst's Type #1 Type #2 Sample Descriptions VAE/Point Cour Notes % Client-Supplied Data | Macroscopic Optical Properties Optical Properties Optical Properties Optical Characteristics 1 Lab Sample # וו חח n_D II II Qn Fiber Asb Coun 2-Counts Sample Type Visual Gross <u>•62.7</u> 559788 n_D I $n_D \perp$ nn I 2.7 Fiber Color Fiber Color VAE VAE ٥ 141 Asb Counts Extinction Extinction Pleochrois Extinction Field Sample # Friability VAE VAF Fiber Biref.9 Biref. Biref.⁹ Texture⁵ 0-253-0096 F or N Floogation Floogation Elongation Count PC 4 VAE Percentage Nonfibrous Types 15 Non-Asbestos-Containing Analytical Method: Asbestos-Containing i Sample Location (from Chain of Custody): % Asbestos (12) % Fibrous Non-Asbestos (13) Analyst's Sample Descriptio Type #1 Type #2 Type #3 Notes VAE/Point Count Client-Supplied Data Macroscopic Optical Properties Optical Properties Optical Properties % VAE/Point Counts % Optical Characteristics Lab Sample # n_DII Morph⁶ n_D II ⁿD II Morph⁶ Morph⁶ Fiber 4.1 Sample Type¹ 1. (79 n_D ⊥ nD ⊤ π_D ⊥ 559789 Fiber Color Fiber Color⁷ VAE VAF Ø. 1.03 Fiber Asb Counts Extinction 10 Extinction Extinction Pleochroism Sample Color Pleochroism Pleochroism Field Sample # Friability4 VAE VAE 6 Fiber Texture⁵ Biref.⁹ Asb Counts 0-253-0100 F or N Elongation Elongation Elongation Counts PC VAE VAE Percentage Nonfibrous Types Analytical Method: Asbestos-Containing Non-Asbestos Containing Date of Analysis: フィ3ィーコン AK Analyst:

Analytical Methods:

- 1, EPA/600/R-93/116 Without Gravimetry
- 2. EPA/600/R-93/116 With Gravimetry
- 3. EPA/600/R-93/116: 400 Point Count
- 4. EPA/600/R-93/116: 1000 Point Count
- 5, PLM NOB Chatfield Method
- 6. NYDOH ELAP 198.1 (Modified): Matrix Reduction
- 7. State of New Jersey DOLAWD Method (38 N.J.R. 2526)
- 8. Other (specify):

Lab Job#	N/A	•	BLI Pr	oject#	L537807	7_	Name	e of Clie	ent	/Projec	t:	5966	07-	RTP-EI	PA ·	SAME	PLES		
Sample	Type ¹	Visual Gross ²		Sample Colo	3	Friability ⁴	Sample Texture ⁵	Morpholog	9y ⁶	Fiber Color ⁷	Pleo	chroism ⁸	ı	B <u>ire</u> ⁹ 3 Hi		pes ¹²	Non-Asbestos Types ¹³	Optical/Morph. Characteristics 14	Non-Fibro
1 pipe insulation 2 pipe elbow 3 roofing material	6 acoustical tile 7 linoleum 8 floor tile	1 Homogenous 2 Helerogenous	1 black 2 tan 3 gold 4 yellow	7 brown 8 blue 9 white 10 red	13 orange 14 various 15 other	Friable or Nonfriable	1 cementic. 2 granular 3 fibrous 4 firm	1 wavy 2 straight 3 splayed en 4 fiber bundl		1 clear 2 tan 3 blue	1 no	2 yes	Ext 1	inction 10 2 parallel 3	amo croc	sotile	1 cellulose 2 fiberglass 3 mineral wool 4 synthetic fibe	1 undulose ext. 2 isotropic 3 shot 4 morphology	1 matrix 2 binder 3 CaSO₄ 4 CaCO₂
4 soll 5 fire-proofing	9 mastic/adhesive 0 other	3 Layered	5 silver 6 gray	11 green 12 pink			5 soft 6 paper-like	5 single fiber 6 blacky	rs	4 brown 5 other	il yes,	give calor			trem actir		5 wollastonile other	5 mult.elon.(flips)	5 Mica 6 other
Sample Locat		I		12 part		<u></u>	I P P P P P P P P P P P P P P P P P P P	1			L		!						i
Sample Local	Sample Desc			itos #1	Asbes	stos #2	Asbe	stos #3	Г	% Asbestos	Гуре ((12)	Т	9	6 Fibr	ous Non-	-Asbeslos Type		Analyst's
Lab Sample #	Client-Supplied Data	Macroscopic		roperties	<u> </u>	Properties	<u> </u>	Properties ND II		/AE/Point Coy	4	%	┼	E/Point Co	unt	%	Optical Ch	aracteristics 14	Notes
	Sample Type ¹	Visual Gross ²	Morph ⁶	1.627		uD II	Morph ⁶		14	Asb Counts:	100	3.5		Fiber Counts:					
559790	O	1	Fiber Color ⁷	1.6 14	Fiber Color ⁷	nD ⊤	Fiber Color ⁷	uD ⊤		VAE	_			VAE					
Field Sample #	Friability ⁴	Sample Color ³	Pleochroism	Extinction 10	Pleochroism	Extinction 10	Pleochroism	Extinction 10		Asb Counts:				Fiber Counts:					
	· · · · · · · · · · · · · · · ·	6	1						_	VAE				VAE Fiber					-
0-253-0101- PC	F or N	Texture ⁵	Biref. ⁹	Elongation 11	Biref. ⁹	Elongation 11	Biref. ⁹	Elongation ¹¹		Asb Counts:				Counts:	_				
PC		4	<u> </u>	1+		<u> </u>	<u> </u>	<u> </u>	<u>L</u> _	VAE			<u> </u>	VAE Nonfibre	ous T	vpes ¹⁵	Pero	entage	
Asbestos-C	ontaining 🔏	Non-A	Asbestos	-Contair	ning 🗆	Ar	nalytical	Method:								<	46.	เ]
Sample Local	•																		
	Sample Desc Client-Supplied Data	riptions Macroscopic	Typ Optical F	e #1 Properties		e #2 Properties		e #3 Properties	Η,	% Asbesto /AE/Point Cou		%	VA	E/Point Co		%	Non-Asbestos (1 Optical Ch	aracteristics ¹⁴	Analyst's Notes
Lab Sample #			Morph ⁶	n _D II	Morph ⁶	II On	Morph ⁶	uD II	4	Asb Counts:	7	1-73	F	Fiber					
559791	Sample Type ¹	Visual Gross ²	Fiber Color ⁷	1.62 8	Fiber Color ⁷	n _D ⊥	Fiber Color ⁷	n _D ⊥		VAE	4	-		Counts: VAE	+				
			<u> </u>	1205	Ī	<u> </u>	<u> </u>	<u> </u>	_		٧		L	ļ	-				-
Field Sample #	Friability ⁴	Sample Color ³	Pleochroism	Extinction 10	Pleochroism ⁸	Extinction 10	Pleochroism	Extinction 10		Asb Counts:				Fiber Counts:					
		<u></u>	<u> </u>						_	VAE			L	VAE Fiber	_				-
0-253-0102-	F or N	Texture ⁵	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Elongation ¹¹		Asb Counts:				Counts:	_				
PC		4	<u> </u>	14	<u> </u>	<u></u>	<u> </u>	<u> </u>		VAE			L	VAE	nus T	vnes 15	Pero	entage	<u> </u>
Asbestos-Containing Non-Asbestos-Containing Analytical Method: Nonfibrous Types 15 Percentage Asbestos-Containing Analytical Method: Q I I I I I I I I I I I I I I I I I I]											
Sample Locat	•					- 40	.	- #2	_	% Asbesto	n /12				1 70	Eibrous M	on-Asbestos (13	1	Analyst's
	Sample Desc Client-Supplied Data	,	Typ Optical F			e #2 Properties		e #3 Properties	Η,	/AE/Point Cou		%	VA	E/Point Co		%		aracteristics 14	Notes
Lab Sample #		2	Morph ⁶	II Qn	Morph ⁶	uD II	Morph ⁶	uD II		Asb Counts:				Fiber Counts:					
	Sample Type 1	Visual Gross ²	Fiber Color ⁷	nDΤ	Fiber Color ⁷	uD ⊤	Fiber Color ⁷	n _D ⊥		VAE				VAE	1				
		Sample Color ³	Pleochroism ⁸	Extinction 10	Pleochroism ⁸	Extinction ¹⁰	Pleochroism ⁶	Extinction 10		Asb Counts:	-		\vdash	Fiber Counts	\dashv				
Field Sample #	Friability ⁴	Comple Color								VAE	\dashv			VAE	7				
	ForN	Texture ⁵	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Elongation ¹¹	Biref. ⁹	Elongation ¹¹		Non-empty Counts:	7			Fiber Counts:					
										VAE	7			VAE					
Asbestos-C	ontaining o	Non-4	Sbestos	-Contair	nina n	Δr	nalytical	Method:			7			Nonfibro	ous T	ypes ¹⁵	Perc	enlage	
**************************************				Comun	ing a		,			***************************************			!						
Sample Locat	Sample Desc			e #1	Тур	e #2	Тур	e #3	<u> </u>	% Asbesto	s (12)	Γ-		% F	ibrous N	on-Asbestos (13)	Analyst's
Lab Sample #	Client-Supplied Data		Optical P	roperties	Optical P	roperties	Optical F	roperties	1	AE/Point Cou	nt	%	VA	Point Cou	ınts	%	Optical Ch	aracteristics 14	Notes
	Sample Type ¹	Visual Gross ²	Morph ⁶	II Dn	Morph ⁵	I O II	Morph ⁶	n _D II		Asb Counts:				Fiber Counts					
			Fiber Color ⁷	uDΤ	Fiber Color ⁷	uD ⊤	Fiber Color ⁷	uD ⊤		VAE				VAE					
		Sample Color ³	Pleochroism ⁸	Extinction 10	Pleochroism ⁸	Extinction 10	Pleochroism	Extinction 10		Asb Counts:	7			Fiber Counts	\exists				
Field Sample #	Friability ⁴									VAE	一			VAE					
	F or N	Texture ⁵	Biref, ⁹	Elongation ¹¹	Biref. ⁹	Elongalion ¹¹	Biref. ⁹	Elongation ¹¹		Asb Counts:				Fiber Counts	1		•		
										VAE				VAE					
Asbestos-C	ontaining c	Non-4	Sbestos	Contain	ina n	Δn	alytical l	Vlethod:						Nonfibro	ous T	ypes ¹⁵	Perc	enlage	
Wanearoa-C	ontaining U	14011-7-	.0503103	Jonan	9 ப	1			۱ns	alveie.		2					L Analyst:	Al	
Analytical Metho	ods:	······································					<i>U</i>	ate of A	1110	y 010.		- 1	<u>u -</u>	<u>ر ب</u>			maryst.		`

- 1. EPA/600/R-93/116 Without Gravimetry 2. EPA/600/R-93/116 With Gravimetry 3. EPA/600/R-93/116: 400 Point Count

- 4. EPA/600/R-93/116: 1000 Point Count 5. PLM NOB Chatfield Method
- 6. NYDOH ELAP 198.1 (Modified): Matrix Reduction
- 7. State of New Jersey DOLAWD Method (38 N.J.R. 2526)
- 8. Other (specify):

ATTACHMENT #2

Certificate of Soil Particle Size Analysis (ASTM D422-63)





BATTA LABORATORIES, INC.

A Certified MBE Company

Delaware Industrial Park, 6 Garfield Way

Newark, DE19713-5817

Tel. (302)737-3376 Fax (302) 737-5764



Report Date:

Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

Test Method: ASTM D422-63

CERTIFICATE OF SOIL PARTICLE SIZE ANALYSIS

Page 1 of 3

8/27/2007

Samplin	g Data				W			Date Sampled:	3/28/2007		
BLI Proje	ect#:	L537807						Sampled By:	Client		
Project N	lame:	596607-RTP-EPA	SAMPLES	3				Date Analyzed:	7/17-23/2007		
Sam	ple ID	Client-sup	plied Da	ita	Physical Data		F	Reported Results			
Lab Sample#	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Sieve Size No.	Percent	Passing		
•							4	10	00		
			**				10	65	5.8		
559778	0-253-	CHISEL-DAY 1	soil	n/a	firm	brown	50	2	1		
	0049						200	9	.7		
							4	1(00		
							10	69).1		
559779	0-253-	SHOVEL-DAY 2	soil	n/a	firm	gray	50	27	7.6		
	0050					o ,	200	;	7		
							4	41	00		
		OSC-UPPER SITE	soil	n/a	firm		10		3.8		
	0-253-					hanna			.8		
559780	0051					brown	50				
							200	13	3.3		
							4	1(00		
	0.050	OOO LIDDED OITE	soil				10	77	7.3		
559781	0-253- 0052	OSC-UPPER SITE DUP	SOII	n/a	firm	brown	50	35	5.6		
	0052	DOP					200	14	1.8		
			······································				4	10	00		
							10		1.6		
559782	0-253-	RAKE-DAY 1	soil	n/a	firm	brown	50		2.5		
000.02	0053	- 16 L9 15000 MPF 7 S S			******		200		5.4		

ANALYST: Craig Testing Laboratories of Maryland, Inc.

REVIEWED BY:

b/ 08/28/07

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.

Report Date:



BATTA LABORATORIES, INC.

A Certified MBE Company

Delaware Industrial Park, 6 Garfield Way

Newark, DE19713-5817

Tel. (302)737-3376 Fax (302) 737-5764



Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF SOIL PARTICLE SIZE ANALYSIS

Test Method: ASTM D422-63

Page 2 of 3

8/27/2007

Sampling BLI Project Project Na	xt #:	L537807 596607-RTP-EPA	SAMPLES	3				Date Sampled: Sampled By: Date Analyzed:	3/28/2007 Client 7/17-23/2007	
Sampl		Client-sup	plied Da	ita	Physical Data			Reported Results		
Lab Sample# S	Client	Sample Location	Material Type	Friable?	Texture	Color	Sieve Size No.	Percent F	Passing	
559783	0-253- 0054	RAKE-DAY 1 DUP	soil	n/a	firm	brown	4 10 50 200	100 60 28. 5		
559784	0-253- 0055	RAKE-DAY 2	soil	n/a	firm	brown	4 10 50 200	100 81. 47. 20.	5 5	
559785	0-253- 0093	CHISEL-DAY 2	soil	n/a	firm	brown	4 10 50 200	100 46. 21. 6.3	4 6	
559786	0-253- 0094	CHISEL-DAY 3	soil	n/a	firm	brown	4 10 50 200	10 70. 44 12.	6 3	
559787	0-253- 0095	SHOVEL-DAY 3	soil	n/a	firm	gray	4 10 50 200	10 98. 38. 20.	7 2	

ANALYST: Craig Testing Laboratories of Maryland, Inc.

REVIEWED BY:

: op/8/07

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.



EPA LAB ID #DE004

BATTA LABORATORIES, INC.

A Certified MBE Company Delaware Industrial Park, 6 Garfield Way Newark, DE19713-5817 Tel. (302)737-3376 Fax (302) 737-5764



Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF SOIL PARTICLE SIZE ANALYSIS

Page 3 of 3

		•		Test I	Method: AST	TM D422-63		Report Date:	8/27/2007
Samplin	g Data							Date Sampled:	3/28/2007
BLI Proje	-	L537807						Sampled By:	Client
Project N		596607-RTP-EPA	SAMPLES	3				Date Analyzed:	7/17-23/2007
			Physic	al Data	Reported Results				
Lab	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Sieve Size No.	Percent	Passing
							4	10	00
							10	74	1.8
559788	0-253-	RAKE-DAY 3	soil	n/a	firm	brown	50	4	6
	0096	,					200	. 17	7.8

ANALYST: Craig Testing Laboratories of Maryland, Inc.

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

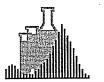
^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.

ATTACHMENT #3

Certificate of Soil Moisture Analysis (ASTM D4643-00)



BATTA LABORATORIES, INC.



A Certified MBE Company Delaware Industrial Park, 6 Garfield Way Newark, DE19713-5817 Tel. (302)737-3376 Fax (302) 737-5764



Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF SOIL MOISTURE ANALYSIS

Page 1 of 3

				Test N	Method: AST	M D4643-00		Report Date:	8/27/2007	
Samplin BLI Proje Project N	ect #:	L537807 596607-RTP-EPA	SAMPLES	S				Date Sampled: Sampled By: Date Analyzed:	3/28/2007 Client 7/17-23/2007	
Sami	ole ID	Client-sup	plied Da	ita	Physic	al Data_	Reported Results			
Lab	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Initial Weight (g) (Jar + Sample)	Percent Mo	oisture (%)	
559778	0-253- 0049	CHISEL-DAY 1	soil	n/a	firm	brown	376.05	16	5.5	
559779	0-253- 0050	SHOVEL-DAY 2	soil	n/a	firm	gray	405.22	24	I .6	
559780	0-253- 0051	OSC-UPPER SITE	soil	n/a	firm	brown	417.04	21	l. 1	
559781	0-253- 0052	OSC-UPPER SITE DUP	soil	n/a	firm	brown	674.07	23	3.6	
559782	0-253- 0053	RAKE-DAY 1	soil	n/a	firm	brown	684.91	14	1.9	

ANALYST: Craig Testing Laboratories of Maryland, Inc.

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.



EPA LAB ID #DE004



BATTA LABORATORIES, INC.

A Certified MBE Company Delaware Industrial Park, 6 Garfield Way Newark, DE19713-5817 Tel. (302)737-3376 Fax (302) 737-5764



Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF SOIL MOISTURE ANALYSIS

Page 2 of 3

				Test N	/lethod: AST	M D4643-00		Report Date:	8/27/2007
Samplin BLI Proje Project N	ect#:	L537807 596607-RTP-EPA	SAMPLES	6				Date Sampled: Sampled By: Date Analyzed:	3/28/2007 Client 7/17-23/2007
	ole ID	Client-sup	plied Da	ta	Physica	al Data	Reported Results		
Lab	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Initial Weight (g) (Jar + Sample)	Percent M	oisture (%)
559783	0-253- 0054	RAKE-DAY 1 DUP	soil	n/a	firm	brown	432.11	17	7.5
559784	0-253- 0055	RAKE-DAY 2	soil	n/a	firm	brown	628.04	21	.9
559785	0-253- 0093	CHISEL-DAY 2	soil	n/a	firm	brown	438.98	24	J.2
559786	0-253- 0094	CHISEL-DAY 3	soil	n/a	firm	brown	572.15	2	.3
559787	0-253- 0095	SHOVEL-DAY 3	soil	n/a	firm	gray	499.07	19	9.2

ANALYST: Craig Testing Laboratories of Maryland, Inc.

REVIEWED BY:

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.



EPA LAB ID #DE004

BATTA LABORATORIES, INC.

A Certified MBE Company Delaware Industrial Park, 6 Garfield Way Newark, DE19713-5817 Tel. (302)737-3376 Fax (302) 737-5764



Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF SOIL MOISTURE ANALYSIS

Page 3 of 3

				Test N	/lethod: AST	M D4643-00)	Report Date:	8/27/2007
Samplin	g Data							Date Sampled:	3/28/2007
BLI Proje	ect #:	L537807						Sampled By:	Client
Project N	lame:	596607-RTP-EPA	SAMPLES	3				Date Analyzed:	7/17-23/2007
Samp	ole ID	Client-supplied Data Physical Data		Reported Results					
Lab Sample#	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Initial Weight (g) (Jar + Sample)	Percent M	loisture (%)
559788	0-253- 0096	RAKE-DAY 3	soil	n/a	firm	brown	667.7	1	8.4

ANALYST: Craig Testing Laboratories of Maryland, Inc.

REVIEWED BY: http://or/28/57

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.

ATTACHMENT #4

Initial Report of Soil Analyses (Particle Size and Moisture)
By
Craig Testing Laboratories of Maryland, Inc.

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121

LABORATORY ANALYSIS

Sample Number:

0-253-0049

Sample Location:

Chisel - Day 1

Initial Weight (Jar & Sample):

376.05 grams

Percent Moisture:

16.5%

Washed Gradation Analysis

Sieve Size	Percent Passing

No. 4	100.0
No. 10	65.8
No. 50	21.0
No. 200	9.7

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted, CRAIG TESTING ABORATORIES OF MARYLAND, INC.

Chris Cannan President

CC/sic

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121A

LABORATORY ANALYSIS

Sample Number:

0-253-0050

Sample Location:

Shovel - Day 2

Initial Weight (Jar & Sample):

405.22 grams

Percent Moisture:

24.6%

Washed Gradation Analysis

Sieve Size Percent Passing

No. 4 100.0 No. 10 69.1 No. 50 27.6 No. 200 7.0

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted.
CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121B

LABORATORY ANALYSIS

Sample Number:

0-253-0051

Sample Location:

OSC

Initial Weight (Jar & Sample):

417.04 grams

Percent Moisture:

21.1%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4

100.0

No. 10

73.8

No. 50

31.8

No. 200

13.3

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING L'ABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121C

LABORATORY ANALYSIS

Sample Number:

0-253-0052

Sample Location:

OSC DUP

Initial Weight (Jar & Sample):

674.07 grams

Percent Moisture:

23.6%

Washed Gradation Analysis

Sieve Size	Percent Passing
No. 4	100.0
No. 10	77.3
No. 50	35.6
No. 200	14 8

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121D

LABORATORY ANALYSIS

Sample Number:

0-253-0053

Sample Location:

Rake - Day 1

Initial Weight (Jar & Sample):

684.91 grams

Percent Moisture:

14.9%

Washed Gradation Analysis

<u>Sieve Size</u> <u>Percent Passing</u>

No. 4	100.0
No. 10	64.6
No. 50	32.5
No. 200	15.4

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted, CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 - 23, 2007

LAB NUMBER:

97121E

LABORATORY ANALYSIS

Sample Number:

0-253-0054

Sample Location:

Rake - Day 1 DUP

Initial Weight (Jar & Sample):

432.11 grams

Percent Moisture:

17.5%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4 No. 10 No. 50 No. 200

100.0

28.2

5.0

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121F

LABORATORY ANALYSIS

Sample Number:

0-253-0055

Sample Location:

Rake - Day 2

Initial Weight (Jar & Sample):

628.04 grams

Percent Moisture:

21.9%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4 No. 10 No. 50 100.0

47.5

No. 200

20.7

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 - 23, 2007

LAB NUMBER:

97121G

LABORATORY ANALYSIS

Sample Number:

0-253-0093

Sample Location:

Chisel - Day 2

Initial Weight (Jar & Sample):

438.98 grams

Percent Moisture:

24.2%

Washed Gradation Analysis

Sieve Size Percent Passing

No. 4	100.0
No. 10	46.4
No. 50	21.6
No. 200	6.3

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING ORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 - 23, 2007

LAB NUMBER:

97121H

LABORATORY ANALYSIS

Sample Number:

0-253-0094

Sample Location:

Chisel - Day 2

Initial Weight (Jar & Sample):

572.15 grams

Percent Moisture:

2.3%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4 No. 10

100.0

No. 50

70.6

No. 200

44.0 12.3

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 - 23, 2007

LAB NUMBER:

971211

LABORATORY ANALYSIS

Sample Number:

0-253-0095

Sample Location:

Shovel - Day 3

Initial Weight (Jar & Sample):

499.07 grams

Percent Moisture:

19.2%

Washed Gradation Analysis

Sieve Size	Percent Passin
No. 4	100.0

No. 4 100.0 No. 10 98.7 No. 50 38.2 No. 200 20.6

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted, CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121J

LABORATORY ANALYSIS

Sample Number:

0-253-0096

Sample Location:

Rake - Day 3

Initial Weight (Jar & Sample):

667.70 grams

Percent Moisture:

18.4%

Washed Gradation Analysis

Sieve Size

Percent Passing

No.	4
No.	10
No.	50

100.0 74.8

. 50

No. 200

46.0 17.8

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

CC/sic -

ATTACHMENT #5

Chain of Custody

No: 0-253-04/04/07-0001

Page 1 of 2

REAC

Edison, N.J.

EPA Contract Number: EP-C-04-032

CHAIN OF CUSTODY RECORD

Site #: 0-253

Howard Schmidt 609-865-6650

3 18 oz glass 1 16 oz glass 16 oz glass 1 16 oz glass 1 16 oz glass 1 16 oz glass 1 16 oz glass 1 16 oz glass 1 16 oz glass Numb Cont Container 1 8 oz glass 1 8 oz glass 1 8 oz glass 1 8 oz glass 3/28/2007 Collected 3/28/2007 3/28/2007 3/28/2007 3/28/2007 3/28/2007 3/28/2007 3/28/2007 3/28/2007 3/28/2007 3/28/2007 3/28/2007 Matrix Soil Soil Soil Soil Soil Soil Soil Soil Soil Soil carb 435 asbestos carb 435 asbestos carb 435 asbestos carb 435 asbestos carb 435 asbestos carb 435 asbestos astm d6565-00 astm d6565-00 astm d6565-00 astm d6565-00 astm d6565-00 astm d6565-00 astm d6565-00 astm d422-63 astm d422-63 astm d422-63 astm d422-63 astm d422-63 astm d422-63 astm d422-63 Analyses OSC - Upper Site Dup OSC - Upper Site Dup Rake - Day 1 Dup OSC - Upper Site Rake - Day 1 Dup OSC - Upper Site Shovel - Day 2 Shovel - Day 2 Chisel - Day 1 Chisel - Day 1 Rake - Day 2 Rake - Day 1 Rake - Day 1 Location 0-253-0049 0-253-0050 0-253-0053 0-253-0054 0-253-0055 0-253-0049 0-253-0050 0-253-0052 0-253-0052 0-253-0053 0-253-0054 0-253-0051 0-253-0051 Sample # Lab#

Special Instructions: Analyses: ASTM D422-63(2002)e1, D6565-00(2005), and C.A.R.B. 435 with 823% detection limit

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

шe			
Time			
Date			
Received by			
Date			
Relinquished By			
Items/Reason	X		
Time	Z15/11		
Date	SICH 25/56/2		
Received by	BLY		
Date	1/2/07	,	
Relinquished by ,	Malsha		
Items/Reason	imoles		

* Sayles .0-257-0055 and 0-257-0096 Need clarification. There can discrepensies for col

Page 2 of 2

REAC

Edison, N.J.

EPA Contract Number: EP-C-04-032

CHAIN OF CUSTODY RECORD

No: 0-253-04/04/07-0001

Site #: 0-253 Howard Schmidt

Howard Schmidt 609-865-6650

Lab#	Sample #	Location	Analyses	Matrix	Collected	Numb Cont Container	Container
	0-253-0055	Rake - Day 2	carb 435 asbestos	Soil	3/28/2007	-	8 oz glass
	0-253-0093	Chisel - Day 2	astm d422-63 astm d6565-00 carb 435 asbestos	Soil	3/29/2007		1 16 oz glass
	0-253-0094	Chisel - Day 3	astm d422-63	Soil	3/29/2007	T	1 16 oz glass
		gan opposite and	astm d6565-00 carb 435 asbestos				
	0-253-0095	Shovel - Day 3	astm d422-63	Soil	3/29/2007		1 16 oz glass
			astm d6565-00				
	0-253-0095	Shovel - Day 3	carb 435 asbestos	Soil	3/29/2007		16 oz glass
	0-253-0096	Rake - Day 3	astm d422-63	Soil	3/29/2007		1 16 oz glass
		44-44-94-4	astm d6565-00				
	0-253-0096	Rake - Day 3	astm d422-63	Soil	3/29/2007		16 oz glass
			astm d6565-00				
	0-253-0100	OSC - JLW2	carb 435 asbestos	Soil	3/29/2007	-	Bag
	0-253-0101	OSC - JLW3	carb 435 asbestos	Soil	3/29/2007	, -	Bag
	0-253-0102	OSC - JLW1	carb 435 asbestos	Soil	3/29/2007	-	Bag

Special Instructions: Analyses: ASTM D422-63(2002)e1, D6565-00(2005), and C.A.R.B. 435 with 8/45% detection limit

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Time			
Date			
Received by			
Date			
Relinquished By Date			
Items/Reason	23 A		
Time	_D;_D;		
Date	D:11 45/85/4	, , ,	
Received by	Bols		
Date	TORY		
Relinguished by	Charleton 1		
Items/Reason	Samoles		

Bo Li

From:

Schmidt, Howard D [howard.d.schmidt@lmco.com]

Sent:

Friday, July 13, 2007 7:23 AM

To:

Bo Li

Subject:

corrected soil COC from Lockheed Martin

Attachments: Trip 1 Soil COC - corrected 071307.pdf

Bo,

I have attached a corrected copy of the COC in PDF format. It includes any issues that were noted in writing on the original hard copy. Please contact me if you have any other questions or concerns.

Thank you for bringing the errors to our attention.

Regards,

Howard

Howard D. Schmidt, M.S., M.B.A. Atmospheric Modeling Team Leader Lockheed Martin/REAC 2890 Woodbridge Ave. Bldg. 209 Edison, NJ 08837 732-321-4280 (o) 609-865-6650 (c)

10850-C Hanna Street Beltsville, Maryland 20705

(301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121

LABORATORY ANALYSIS

Sample Number:

0-253-0049

Sample Location:

Chisel - Day 1

Initial Weight (Jar & Sample):

376.05 grams

Percent Moisture:

16.5%

Washed Gradation Analysis

Sieve Size Percent Passing

No. 4 100.0 No. 10 65.8 No. 50 21.0 No. 200 9.7

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted, CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121A

LABORATORY ANALYSIS

Sample Number:

0-253-0050

Sample Location:

Shovel - Day 2

Initial Weight (Jar & Sample):

405.22 grams

Percent Moisture:

24.6%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4 No. 10 100.0 69.1

No. 50

27.6

No. 200

7.0

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 - 23, 2007

LAB NUMBER:

97121B

LABORATORY ANALYSIS

Sample Number:

0-253-0051

Sample Location:

OSC

Initial Weight (Jar & Sample):

417.04 grams

Percent Moisture:

21.1%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4	
No. 10	
No. 50	
No. 200	

100.0 73.8 31.8

13.3

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING L'ABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121C

LABORATORY ANALYSIS

Sample Number:

0-253-0052

Sample Location:

OSC DUP

Initial Weight (Jar & Sample):

674.07 grams

Percent Moisture:

23.6%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4 No. 10 100.0 77.3

No. 50

35.6

No. 200

14.8

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121D

LABORATORY ANALYSIS

Sample Number:

0-253-0053

Sample Location:

Rake - Day 1

Initial Weight (Jar & Sample):

684.91 grams

Percent Moisture:

14.9%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4 No. 10 No. 50 No. 200

100.0 64.6

32.5

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan

President

10850-C Hanna Street Beltsville, Maryland 20705

(301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121E

LABORATORY ANALYSIS

Sample Number:

0-253-0054

Sample Location:

Rake - Day 1 DUP

Initial Weight (Jar & Sample):

432.11 grams

Percent Moisture:

17.5%

Washed Gradation Analysis

Sieve Size

 No. 4
 100.0

 No. 10
 60.0

 No. 50
 28.2

 No. 200
 5.0

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Passing

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121F

LABORATORY ANALYSIS

Sample Number:

0-253-0055

Sample Location:

Rake - Day 2

Initial Weight (Jar & Sample):

628.04 grams

Percent Moisture:

21.9%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4 No. 10 No. 50

100.0

81.5

No. 200

47.5 20.7

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG ESTING L'ABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121G

LABORATORY ANALYSIS

Sample Number:

0-253-0093

Sample Location:

Chisel - Day 2

Initial Weight (Jar & Sample):

438.98 grams

Percent Moisture:

24.2%

Washed Gradation Analysis

Sieve Size	Percent Passing

No. 4	100.0
No. 10	46.4
No. 50	21.6
No. 200	6.3

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING ORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121H

LABORATORY ANALYSIS

Sample Number:

0-253-0094

Sample Location:

Chisel - Day 2

Initial Weight (Jar & Sample):

572.15 grams

Percent Moisture:

2.3%

Washed Gradation Analysis

Sieve Size Percent Passing

No. 4100.0No. 1070.6No. 5044.0No. 20012.3

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LA ORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705

(301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

971211

LABORATORY ANALYSIS

Sample Number:

0-253-0095

Sample Location:

Shovel - Day 3

Initial Weight (Jar & Sample):

499.07 grams

Percent Moisture:

19.2%

Washed Gradation Analysis

Sieve Size

No. 4 100.0 No. 10 98.7 No. 50 38.2 No. 200 20.6

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Passing

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted, CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

March 28, 2007

SAMPLED BY:

Client

DATE TESTED:

July 17 – 23, 2007

LAB NUMBER:

97121J

LABORATORY ANALYSIS

Sample Number:

0-253-0096

Sample Location:

Rake - Day 3

Initial Weight (Jar & Sample):

667.70 grams

Percent Moisture:

18.4%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4 No. 10 100.0

74.8

No. 50

46.0

No. 200

17.8

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

CC/sic -

Check List for RTP Delivery Package

Batta Laboratories, Inc.
EP-C-04-032
0-25-3-08/07/07-00/1
N/A
Summary Report
Batta Data Sheet for the Summary Report
Original EPA COC
AHERA/ISO Report Sheet (from EDD submitted)
Data Entry 1 Sheet (from EDD submitted)
Data Entry 2 Sheet (from EDD submitted)
Copy of Analytical Benchsheets
Miscellaneous (Specified in the comment box below

Case Narrative/Comment:

This summary report is pursuant to EPA purchase order EP074000155 (EPA Contact Number: EP-C-04-032) for asbestos and slil sample shipment received on Sept 4, 2007, consisting of 4 samples for asbestos, soil moisture and soil particle size, respectively. The report consists of Batta certificate analysis, second-party analytical sheets (Craig Testing Laboratories of Maryland, Inc. for soil moisture and particle size), laboratory analytical benchsheets and monthly oil calibration sheet.

Page 1 of 1

REAC

Edison, N.J.

EPA Contract Number: EP-C-04-032

CHAIN OF CUSTODY RECORD

Site #: 0-253 Howard Schmidt 609-865-6650

t08£157

No: 0-253-08/07/07-0011

1 16 oz glass 16 oz glass 1 16 oz glass 1 16 oz glass Numb Cont | Container 1 8 oz glass 1 8 oz glass 1 8 oz glass 1 8 oz glass Collected 7/25/2007 7/25/2007 7/25/2007 7/25/2007 7/25/2007 7/25/2007 7/25/2007 7/25/2007 Matrix Soil Soil Soil Soil Soil Soil Soil Soil astm d422-63 astm d6565-00 astm d422-63 astm d6565-00 astm d422-63 astm d6565-00 astm d422-63 astm d6565-00 carb 435 asbestos carb 435 asbestos carb 435 asbestos carb 435 asbestos Analyses Lower Site - right Lower Site - right Lower Site - left Upper Site dup Lower Site - left Upper Site dup Upper Site Upper Site Location Lab # Sample # 180 43203 481 43204 276 43199 2-79 43202 275 43198 J777 43200 500274 43197 278 43201

Special Instructions: 8 oz. jars = CARB 435 analysis	35 analysis					SAM	PLES TRA	SAMPLES TRANSFERRED FROM		
						CHA	CHAIN OF CUSTODY#	TODY #		
16 oz. jars = ASTM D422-63 & ASTM D6565-00 analyses	565-00 ana	ilyses								
Items/Reason Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Millian Markey	47-07	1	, d					-		
(Marine)	10.10	1.1.2011	801-4-108	S.S.						
_	_			_			-		_	-



BATTA LABORATORIES, INC.



A Certified MBE Company Delaware Industrial Park, 6 Garfield Way Newark, DE19713-5817 Tel. (302)737-3376 Fax (302) 737-5764



Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF PLM ANALYSIS

Page 1 of 1

			Test Method	d: State of C	alifornia Air	Resources	Board Method 435	Report Date:	10/9/2007
Samplin	_							Date Sampled:	7/25/2007
BLI Proje	ect#:	L537807						Sampled By:	CLIENT
Project N	lame:	596607-RTP-EPA	SAMPLES	3				Date Analyzed:	9/11/2007
Sam	ple ID	Client-su	plied Da	ta	Analytic	cal Data	Re	ported Results	
Lab	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Non-asbestiform Components	Asbestiform Co	mponents
562275	43198	UPPER SITE	soil	n/a	firm	brown	95.75% non-fibrous	4.25% anthophyllite	asbestos containing
562277	43200	UPPER SITE-DUP	soil	n/a	firm	brown	93.75% non-firous	6.25% anthophyllite	asbestos containing
562279	43202	LOWER SITE- RIGHT	soil	n/a	firm	brown	85% non-fibrous	15% anthophyllite (Visual)	asbestos containing
562281	43204	LOWER SITE- LEFT	soil	n/a	firm	brown	95% non-fibrous	5% anthophyllite	asbestos containing

Notes Organically-bound, nonfriable material may interfere with the accurate quantification of asbestos. In these cases, the EPA recommends more definitive analysis by a matrix-reduction method (i.e. Chatfield SOP-1988-02, Rev.1)

Note: Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. Due to this, the EPA recommends more definitive analysis using analytical electron microscopy.

ANALYST: Asghar Keyvanfar

REVIEWED BY: 19/19/97

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Due to the general heterogeneity of asbestos containing materials (ACM), EPA and OSHA have recommended submission of at least three samples of each type of materials for PLM analysis. Submission of fewer samples may compromise the accuracy of ACM determination.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.



EPA LAB ID #DE004

BATTA LABORATORIES, INC.

A Certified MBE Company Delaware Industrial Park, 6 Garfield Way Newark, DE19713-5817 Tel. (302)737-3376 Fax (302) 737-5764



Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF SOIL MOISTURE ANALYSIS

Page 1 of 3

				Test N	/lethod: AST	M D4643-0	0	Report Date:	10/9/2007
Samplin	g Data							Date Sampled:	7/25/2007
BLI Proje		L537807						Sampled By:	Client
Project N	lame:	596607-RTP-EPA	SAMPLES	S				Date Analyzed:	9/10/2007
Sam	ple ID	Client-sup	plied Da	ita	Physic	al Data	R	eported Result	S
Lab Sample#	Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Initial Weight (g) (Jar + Sample)	Percent M	loisture (%)
562274	43197	Upper Site	soil	n/a	firm	brown	642.89	;	34
562276	43199	Upper Site Dup	soil	n/a	firm	brown	. 585.15	· 1	8.4
562278	43201	Lower Site Right	soil	n/a	firm	brown	721.68		14
562280	43203	Lower Site Left	soil	n/a	firm	brown	786.16	2	4.9

ANALYST: Craig Testing Laboratories of Maryland, Inc.

^{*}This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.



EPA LAB ID #DE004



BATTA LABORATORIES, INC.

A Certified MBE Company
Delaware Industrial Park, 6 Garfield Way
Newark, DE19713-5817
Tel. (302)737-3376 Fax (302) 737-5764



Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

CERTIFICATE OF SOIL PARTICLE SIZE ANALYSIS

Page 1 of 3

				victiou. 7 to	ГМ D422-63		Report Date:	10/9/2007
Data							Date Sampled:	7/25/2007
t #:	L537807						Sampled By:	Client
me:	596607-RTP-EPA	SAMPLES	3				Date Analyzed:	9/10/2007
e ID	Client-supplied Data			Physical Data		Reported Results		
Client Sample#	Sample Location	Material Type	Friable?	Texture	Color	Sieve Size No.	Percent l	Passing
562274 43197	Upper Site	soil	n/a	firm	brown	4	89	.4
						10	82.4	
						50	58.9	
						200	40)
562276 43199	Upper Site Dup	soil n/a			brown	4	89	.9
						10	83	3
			n/a	/a firm		50	58	.5
						200	37	.2
				······································		4	67	.5
	Lower Site Right	soil	n/a	firm	brown	10	55	.2
562278 43201						50	33	3
						200	19	.3
562280 43203	Lower Site Left	soil	soil n/a	firm	brown	4	88	.1
						10	84	4
						50	5	В
						200	41	.3
t re	#: ne: Pi ID Client ample# 43197 43199	#: L537807 ne: 596607-RTP-EPA Pi	#: L537807 ne: 596607-RTP-EPA SAMPLES PID Client Sample Location Material Type 43197 Upper Site Soil 43199 Upper Site Dup 43201 Lower Site Right Soil	#: L537807 ne: 596607-RTP-EPA SAMPLES EID Client Sample Location Material Type Friable? 43197 Upper Site Soil n/a 43199 Upper Site Dup Soil n/a 43201 Lower Site Right Soil n/a	#: L537807 ne: 596607-RTP-EPA SAMPLES EID Client-supplied Data Physic Client ample# Sample Location Material Type Friable? Texture 43197 Upper Site Soil n/a firm 43199 Upper Site Dup Soil n/a firm 43201 Lower Site Right Soil n/a firm	#: L537807 ne: 596607-RTP-EPA SAMPLES EID Client Sample Location Material Type Friable? Texture Color 43197 Upper Site Soil n/a firm brown 43199 Upper Site Dup Soil n/a firm brown 43201 Lower Site Right Soil n/a firm brown	#: L537807 ne: 596607-RTP-EPA SAMPLES ID Client-supplied Data Physical Data Formation Physical Data Formation Physical Data Physical Data Formation Physical Data Physi	#: L537807 596607-RTP-EPA SAMPLES

ANALYST: Craig Testing Laboratories of Maryland, Inc.

REVIEWED BY

*This report does not constitute endorsement by NVLAP and/or any other US government agencies.

^{*}The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, Inc. assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

^{*} Electronic versions of the certificate of analysis (i.e. Excel files, PDF files, Word files, etc.) are not under the warranty of authenticity and accuracy of the original analytical results kept on file by the Batta Laboratories, Inc. (BLI). Under all circumstances BLI should be notified in writing for any changes made to these electronic certificates of analysis. Under no circumstances will BLI be liable for changes made to the electronic certificate of analysis without BLI's prior consent in writing.

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

July 25, 2007

SAMPLED BY:

Client

DATE TESTED:

September 10, 2007

LAB NUMBER:

97187C

LABORATORY ANALYSIS

Sample Number:

43197

Sample Location:

Upper Site

Initial Weight (Jar & Sample):

642.89 grams

Percent Moisture:

34.0%

Washed Gradation Analysis

Sieve Size

Percent Passing

No. 4

89.4

No. 10

82.4

No. 50

58.9

No. 200

40.0

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

July 25, 2007

SAMPLED BY:

Client

DATE TESTED:

September 10, 2007

LAB NUMBER:

97187

LABORATORY ANALYSIS

Sample Number:

43199

Sample Location:

Upper Site Dup

Initial Weight (Jar & Sample):

585.15 grams

Percent Moisture:

18.4%

Washed Gradation Analysis

Sieve Size	Percent Passing
No. 4	89.9
No. 10	83.0
No. 50	58.5
No. 200	37.2

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted, CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

July 25, 2007

SAMPLED BY:

Client

DATE TESTED:

September 10, 2007

LAB NUMBER:

97187B

LABORATORY ANALYSIS

Sample Number:

43201

Sample Location:

Lower Site Right

Initial Weight (Jar & Sample):

721.68 grams

Percent Moisture:

14.0%

Washed Gradation Analysis

Sieve Size Percent Passing

No. 4	67.5
No. 10	55.2
No. 50	33.0
No. 200	19.3

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TESTING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

10850-C Hanna Street Beltsville, Maryland 20705 (301) 937-9063 Phone (301) 937-9067 Fax

CLIENT:

Batta Laboratories

PROJECT:

REAC

Edison, NJ

EPA Contract Number: EP-C-04-032

MATERIAL:

Soils Samples Submitted by Client for Laboratory Analysis

TEST REQUIRED:

Percent Moisture and Washed Gradation Analysis

DATE SAMPLED:

July 25, 2007

SAMPLED BY:

Client

DATE TESTED:

September 10, 2007

LAB NUMBER:

97187A

LABORATORY ANALYSIS

Sample Number:

43203

Sample Location:

Lower Left side

Initial Weight (Jar & Sample):

786.16 grams

Percent Moisture:

24.9%

Washed Gradation Analysis

Sieve Size	Percent Passing
No. 4	88.1
No. 10	84.0
No. 50	58.0
No. 200	41.3

NOTE:

Washed Gradation Analysis performed in accordance with ASTM D422-63 (2002).

Percent Moisture performed in accordance with ASTM D4643-00.

Respectfully submitted,

CRAIG TEATING LABORATORIES OF MARYLAND, INC.

Chris Cannan President

Refractive Index Oil Calibration Workshe. Single Liquid Method - Dr Su 1993 Manuscript

 $n_D^{S=} n_D^L + (\Delta^L - \Delta^S) * k_i$ Start with:

Becomes: $n_D^L = n_D^{S^-} (\Delta^L - \Delta^S) * K_i$

Where: n^L_D = Index of refraction of the liquid n_D^S = Index of refraction of the solid Δ^L = Dispersion coefficient of the liquid

 $\Delta^{\rm S} = \, {\rm Dispersion} \, \, {\rm coefficient} \, \, {\rm of} \, \, {\rm the} \, \, {\rm solid}$

 $k_{\rm i} =$ Conversion constant (from the matching wavelength to Hartman's Constant)

					-
#IBOL# offRojOll	1106	9690	1095	0902	
Calculated no	25 1.2576	1.680524	_U,82766.1	bh3h29.1	
Temp (C)lati	25			- >	
Kolonv Factor	20.0	01.0	61.0 -	0).0	
Wavelength	17.80	019	6 30	570	
ent- (nf: n0):0argille	0.0/112	0.01226	MX 100001570	0.017759	15 S (15 0) O (13 43 F)
Tiemp Coefficients	7.2	948 000075	0.00042	75 6 000452	99 0.000480
Cargillervalue	TREATER OF THE		1 60 58 1 0 0 0	7 62 56d - 0 0 0	1 64383H 0 02
			DODON N		
Date	2	5			

For calculations:
$$SCO = A_1 = SVO + KO = 0.05 + KLO = 1.07117V - (0.0272 - 0.0 1112) \times 0.05 - 3.0 +$$

n L5378°7 PLM Benchsheet RTP EPA Sample Diage 1 of 1 BATTA Name of Client/Project: Coarse BLI Project # Bl 32 9/ Lab Job # N/A Non-Fibrou Morphology⁶ Friability Pleochroism Types 13 Types¹⁵ Types¹² Sample Type 1 lo 3 Hi Texture⁵ Gross² 2 medium 1 undulose ext chrysotile cellulose 1 black 2 fiberglass 2 isotropic binder 8 blue 2 straight no 2 yes Extinction 14 various Friable 2 oranulai i clear 2 tan 6 acoustical tile 1 pipe insulation 3 crocidolite 3 mineral wool 13 shot CaSO. 3 splayed ends 3 fibrous 2 pipe elbow 3 gold 9 white 15 other 7 linoleum 4 firm 4 fiber bundles 3 blue 2 oblique 4 anthophyllit 4 synthetic fibe 4 morphology CaCO, 10 red Nonfriable 3 roofing material 8 floor tile 4 vellow 5 wollastonite | 5 mull.eion.(flips) 5 Mica 5 single libers 5 silve 5 soft 4 brown Elongation 9 mastic/adhesiv 11 green 4 soil actinolite othe 6 blocky 12 pink 5 fire-proofing 0 other Sample Location (from Chain of Custody): % Fibrous Non-Asbestos Type (13) Asbestos #3 % Asbestos Type (12) Notes Optical Properties VAE/Point Count VAE/Point Count Optical Properties Optical Characteristics Client-Supplied Data | Macroscopic Optical Properties Lab Sample # Asb Counts: 400 UD II n_D II Morph⁶ II Qu Fiber 1.621 4.1 Sample Type¹ Visual Gross n_D I $n_D \perp$ uD T Fiber Color VAF 562275 1.614 Fiber Asb Counts Extinction 10 Extinction 10 Pleochroism Extinction¹¹ Sample Colo Pleochrois Counts Field Sample # Friability⁴ VAE VAE Fiber Asb Counts Biref.⁹ Biref.^B Elongation Florgation Elonoation F or N Texture Count 43148 Percentage Nonfibrous Types Analytical Method: CARG 415 Asbestos-Containing Non-Asbestos-Containing Sample Location (from Chain of Custody): % Fiberous Non-Asbestos (13) Type #2 Analyst's Type #1 Type #3 VAE/Point Count Notes VAE/Point Count % Optical Properties Optical Properties Optical Properties Client-Supplied Data Macroscopio Fiber Lab Sample # n_D II Morph⁶ Morph⁶ II Qn Morph⁶ Counts. 1.625 Sample Type n_D ⊥ 562277 <u>uD</u> Ţ Fiber Colo Fiber Colo VAE 1414 Fiber Ash Counts Extinction 10 Extinction 10 Pleochroist Pleochroismⁱ Sample Color Pleochroism Counts Friability VAE VAE Asb Counts 43200 Biref.9 Biref.9 Elongation Texture Elongation Elongation F or N Counts VAE Nonfibrous Types 15 Percentage Analytical Method: CARB 485 Non-Asbestos-Containing Asbestos-Containing Sample Location (from Chain of Custody): % Fibrous Non-Asbestos (13) Type #1 % Asbestos (12) Analysi's Type #3 Sample Descriptions Type #2 VAE/Point Count Notes Optical Properties % Optical Characteristics Optical Properties Optical Properties Client-Supplied Data Macroscopic Lab Sample # nD II Morph⁶ nD II Morph⁶ no II Morph⁶ Asb Counts Counts VAE Sample Type 1.63. 562279 $n_D \perp$ n_D ⊥ nD T Fiber Color Fiber Color Fiber Color VAE 15 1.113 Asb Counts Extinction Sample Color Pleochroisn Pleochroist Extinction Field Sample # Friability⁴ VAE Fiber Biref.⁹ Birel.9 Texture⁵ Elongalion Biref.9 Elongation Elongation 43202 F or N VAE Nonfibrous Types 15 Analytical Method: Non-Asbestos-Containing D Asbestos-Containing 2 Sample Location (from Chain of Custody) % Fibrous Non-Asbestos (13) Analyst's Type #3 % Asbestos (12) Sample Descriptions Type #1 Type #2 VXE Point Counts Optical Characteristics 14 Optical Properties Optical Properties VAE/Point Count % Optical Properties Client-Supplied Data Macroscopic Asb Counts: /400 ng II Mprph⁶ nD II UD II Fiber Morph⁶ 1525 Visual Gross Sample Type n_D ⊥ n_D I Fiber Color Fiber Color⁷ VAE VAE Fiber Asb Count Extinction Extinction 1 Pleochroism Extinction 10 Pleochroism Sample Color Counts Field Sample # Friability VAE Fiber 43204 Bitel.9 Texture⁵ Biref.⁹ Elongalion¹ Elongation Ash Count

Analytical Methods:

1. EPA/600/R-93/116 Without Gravimetry

F or N

2. EPA/600/R-93/116 With Gravimetry

Asbestos-Containing p

3. EPA/600/R-93/116: 400 Point Count

4. EPA/600/R-93/116: 1000 Point Count

5. PLM NOB Chatfield Method

Elongation

Non-Asbestos Containing D

6. NYDOH ELAP 198.1 (Modified): Matrix Reduction

Analytical Method: EARR 485

Date of Analysis:

7. State of New Jersey DOLAWD Method (38 N.J.R. 2526)

Analyst:

Nonfibrous Types

Percentage

8. Other (specify):